Introductory Address

ON THE

INFLUENCE OF THE STUDY OF SCIENCE UPON THE MIND.

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WHILST I very gladly embrace the opportunity which is offered me of saying a few words to those who have to-day entered upon the studies of natural science, medicine, and surgery, my experience of St. George's Hospital makes me confident of a generous reception on the part of my respected seniors and colleagues, and of an indulgent hearing from the students whom I have the privilege of addressing. If I occupy the first half-hour or so of this winter session in speaking on matters connected with education, however indifferently the subject may be handled, it is one in which all who hear me are equally interested; for, in its widest sense, education embraces all those influences which affect the development and growth of the mind; and these processes, beginning with infancy, continue until the functions of the brain decline or are suspended by death. Our minds may be said to be developed and trained by objects around us, by what we are taught, and by what we teach ourselves; and thus the man becomes what he is made by circumstances, by the effect produced on him by others, and by his own acts. The circumstances under which you find yourselves to-day are all in your favour; the teachers are ready to do their best; the results will depend upon what use is made of these advantages.

I will here make no reference to the powerful influence of surroundings in early life, but may say at once that at the present time a good deal of attention is being directed to the question of how far the education of boys, as generally pursued at our schools, may be capable of improvement in regard to the subjects which have for many generations formed the chief elements in teaching. That those who pass creditably through our public schools have, as a rule, succeeded well in the professions and in political life, experience has hitherto proved; but at the same time it is quite possible that the discipline of the playground and the school may have had more to do with this (and I for one think it has) than anything that is actually learned in the class-room. As to this latter part of it, if I understand rightly the object which is sought to be attained, it is to give such a training to the mind as will enable its possessor to acquire knowledge upon any matter with the greatest possible facility. What I mean by this is, that when a young man has worked well and successfully, whether it be at classics or mathematics or both, his mind will have undergone such a hardening (so to speak) that he will be in a position to master any subjects forming the basis upon which the work of his life is to rest. I do not think that what is generally learned at school or college does much more than this. It would be difficult to exaggerate the value of mathematics as a means of mental training; and when a fine classical scholar becomes in his turn an author, an orator, or even, what he cannot fail to be, a cultivated gentleman, the literature of the ancients will have effected all that could be desired, and what perhaps no other method of education could have done; but do not instances of this kind form the brilliant exceptions to the many upon whose thoughts and future the imperfect knowledge of Greek and Latin, discarded at once and for ever at the end of the school days, exerts no further influence of any sort or kind? Might it not in such cases be possible that some more useful subjects could take the place of the badly learned, and therefore unproductive classics, and be at the same time quite as effective as a mental exercise?

These questions were answered recently as well perhaps as they are capable of being answered,[1] when it was suggested that the fault exists partly in the way in which classics are taught; and that if Latin and Greek were taught in a scientific way—namely, in their relation to other languages, such as French, English, and German—they would become, in being so treated, rather the languages of the living than of the dead. Possibly, after all that can be said on this matter, the truth lies in the fact that, whatever knowledge is thorough, be the subject what it may, it will prove in the end useful; so that in boyhood it is not very important what is learned, so long as it is learned well, if habits of attention have been cultivated, and the art of acquiring information has been gained. Without pursuing this part of the subject any farther, I will presume that in the course of this preliminary education you have at least already found that industry and perseverance are the only necessaries to the thorough learning of anything, and you will by and by have it forced upon your minds that, generally speaking, a capacity for work is the true meaning of what is often, though incorrectly, called genius. Although a very few of the exceptionally successful men in all professions will be found to possess a rare facility for their occupations, and a certain brilliancy pervading their deeds and writings, which in all probability would have been observable in whatever line of life they had adopted, this is not quite genius. True genius, as I understand it, is creative talent, and may especially be seen in painting, in the composition and execution of music, in literature, and in oratory, excellence in any of which can never be acquired without unusual aptitude; and even here to call forth the genius must still be the capacity for work. With this latter qualification, however, and with fairly good abilities, I think it must be allowed that there is no position in any of the liberal professions to which a young man may not attain.

In this lecture theatre the necessity for untiring industry has been often insisted upon, and, within my own comparatively short experience, the truth of such teaching has been amply verified. Examples for illustration taken from our great men have been drawn more ably than I can draw them, and I shall not therefore repeat an oft- though well-told tale. I will ask you to follow me for a few minutes in another direction, whilst I endeavour to show what influence the study of science may be expected to have on the mind.

In your profession you will have the opportunity of meeting with men who have obtained the highest honours in it, and others whom, although not occupying such prominent positions, you will learn to respect, whose friendship you will prize, and in whose society you will by and by find one of your greatest pleasures. The charm which surrounds such men you will discover to consist in a remarkable simple-mindedness. You will observe that they have an unbounded veneration for truth; that they approach any inquiry quite free from prejudice—that, indeed, they have none, since they regard prejudice as the child of ignorance; that if they conceive it right to adopt any line of conduct they will unflinchingly do so, even though it be against their own inclinations or interests; that if they do not know a thing, they are at once ready to confess their ignorance; that they record their failures side by side with their successes; that their sympathies are equally with the poor as with the rich, with the obscure as with the high born, with the Mohammedan as with the Christian, with the convert of all creeds alike. In politics you will fail to interest them in any party cry; but when legislation has for its object the eradication of disease, which they know can by appropriate measures be lessened or stamped out, their influence will be exerted in the direction which their knowledge tells them is the right one. When habits of intemperance are sought to be controlled they will tell how within their knowledge the lives of multitudes are shortened and embittered by drinking—how it is the fruitful source of crime and misery, and they will raise their voices in favour of measures that may be passed to check it, or to substitute recreation for drinking—the often only available form of distraction from the cares of a laborious life. They will have something to say on education, or any subject which will improve the condition of the people. With State matters of this sort you may, I say, elicit their sympathies; but the eccentricities of religious sects or their quarrels neither interest nor disturb them, and from superstition of all sorts they are absolutely free. For as scientific knowledge

[1] See the "Fortnightly Review" for Feb. 1879; article by Mr. E. A. Freeman.

advances so surely does superstition vanish. In saying this you will notice that I make no reference to religion, and, lest I should be misunderstood as to the place which I think religion should occupy in education, I may be allowed to express the belief that no thinking man can doubt the necessity of religious teaching for the young of all classes, as well as for the masses of all ages, and to add that, whatever his convictions in such matters may be, he is content to leave others in the undisturbed possession of their own; but religion is not superstition any more than theology is religion, and the study of science may be said to make us religious when she teaches us that obedience to the laws of nature leads to happiness, whilst their infringement just as certainly leads to the reverse. For the laws of nature are the laws of God. The teachers of superstition require in their pupils faith and credulity, whilst the teachers of science welcome incredulity and insist upon inquiry; the result in the one case being belief, in the other knowledge.

In your intercourse with the men I refer to you are dealing with the class of mind which inevitably results from the acquirement of sound scientific knowledge, and in presenting this to you as one of your rewards, I sincerely believe that I am offering you something better and more likely to conduce to your happiness than any riches you might acquire in commercial pursuits or the honours you might gain in other professions. No one who watches events can fail to notice that the social problems in this country are becoming year by year more numerous, and press upon us with increased urgency. The solution of these problems is largely in the hands of scientific men, for they are in a great measure the guides, although not often the exponents, of public opinion which originates legislation. To satisfactorily grapple with these questions, a corresponding intelligence greater than exists at present is required amongst those with whom they have to deal. When education has effected this amongst the working classes, then, and not till then, will they appreciate the lessons which experience ought to have taught them, and which they at present refuse to learn at the hands of their true leaders—the better informed. Then we may expect to see more thrift, less drunkenness, more industry, more reliance on self and less upon trade unions, a better feeling between the employed and the employers, and, as an outcome of this, a power to compete with foreign manufacture, a power which is now unhappily becoming weaker. If education is to do this for the working classes, we must take care that in the case of others it continue to improve, and I therefore rejoice at the advance which has been made in the direction of natural science as regards general education during the past few years. Much yet, however, remains to be done, and you will begin by and by to think that the average citizen who simply employs his time in gaining his livelihood, and providing a competence for his family, does not occupy a position which would satisfy your intellectual wants, and that with a little more education in natural science he might be a far more useful, and, at the same time, a more companionable, fellow-creature. To him, as he now too often appears, the composition or architecture of his body, the ordinary processes of life, are so many puzzles which remain unsolved until the time arrives when he will come to you to solve the last of all, Why he must die? If he travel through a new country, all forms of animal life and vegetation are to him only what they appear; they convey no lesson to his mind; he can examine them no further; they are barren of suggestion. The progress of the world he regards with stupid wonder. For all this he will, perhaps, endeavour to make you a convert to spiritualism, or condemn you to everlasting perdition because you do not profess faith in some dogma which he has been brought up to believe in. He looks upon the world (a brief period being allowed for its creation) as having existed for all time very much as now he sees it. You will forgive me if I venture to speak to you to-day, as possibly on some matters equally ignorant, but on the eve of enlightenment, and to say that you will learn to regard (if you do not already do so) the history of the world as including a series of epochs, each epoch extending over periods so countless that we have no language in which to express their vastness. Geologists have given a description of this earth of ours as it existed at some periods in which it has been the scene of long histories of races bearing little resemblance to those now existing. Physiologists tell us how they are able to trace all forms of life back to its original form, the primeval cell. How this cell imbibes nutriment from without till in dying it gives birth to other cells. How next a many-celled creature appears protruding its limbs which serve to move it, and to place food into an opening which it has now displayed for its reception. Amongst communities of such as these whilst development proceeds, the weaker becomes the prey of the stronger, the better specimens remaining, and the offspring of these attaining to higher forms of organisation. What form these animals shall, in the future, assume, will depend absolutely upon the conditions under which they are forced to exist. So long as they remain in water, fishes will succeed fishes, but when, as will happen from currents and tides, that during some periods they are left on shores, creatures of an amphibious nature will be produced, and provided that conditions obtain under which the lives of these animals are spent on the land, their descendants will be found as beasts and birds. By degrees, imperceptibly to yourselves, you will be able to overcome the difficulties which present themselves to the unscientific mind of estimating the requisite periods for development of species, and the necessity for demonstrating the connecting links between species will not exist for you, for you will have familiarised yourselves with the inevitable death of these links, death which now as ever takes place in the struggle for existence between individuals of similar habits and form.

What, then, is the cause of variety in the earlier forms of life? The force of circumstances. Whence the propagation of each species? Inheritance. Why the higher development of species? The struggle for life and survival of the fittest. How the countless varieties? The pairing of individuals. One more question. Why, whilst some forms of animal life appear in constant progress, do others remain the same for so long? Because in the case of the latter the conditions under which they live do not change. In considerations of this sort lies the poetry of the physiologist. A companion picture to this, and none the less true to life, may be drawn of vegetation as it has existed from early periods up to the present. Let me ask you for a moment to reflect how fascinating is at once the idea of possessing an intimate acquaintance with these things, how engrossing must be the study of any portion of their history. What an enlarged view of life will he take who understands these matters so well that his knowledge becomes a very part of him. Side by side with the development of animal and vegetable life must be placed the development of mind. This you will find to begin with the first glimmering of consciousness in the lowest forms of life where it is conspicuous. And here let me pass over a period until the expiration of that in which we find an animal performing, in obedience to his previous experience, some act with a definite object; then the first ray of reason appears. Thus we soon find ourselves on the road which leads us gradually, but surely, to the development of the highest order of brain, whose habitat is man. If in having thus briefly touched upon the ability which science has to trace onwards the development of living tissue to the organisms we see around us, or from these again backwards to the lowest forms which exhibit life, I have omitted to refer to a first cause, it is because such reference would not be within my province. An attempt to examine beyond the point at which life begins and where it terminates would lead us outside the boundaries of science to the regions of speculation, and perhaps into the unwholesome atmosphere of metaphysics. For us it is sufficient if, in reflecting upon the countless ages which must have been taken up for the development of that brain which enables us so to reflect, we can see how, in the words of Professor Tyndall, "amid all our speculative uncertainty there is one practical point as clear as the day—namely, that the brightness and usefulness of life, as well as its darkness and disaster, depend to a great extent upon our own use of this miraculous organ."

You will find that, as the laws which regulate the development of body and mind are unchanging, so are those which determine their degeneration by age and by disease up to the time of their death. Every bodily and mental change having a definite cause, it will be your duty to discover it. You cannot fail to observe how indestructible is all matter; nay, how undying are our very deeds, in that it is impossible for anything to be done by one of us without a result for good or bad, twofold in its nature; in the one case upon those around us, in the other upon ourselves. How even our words and thoughts are productive—in short, how, whether we will it or not, we are perforce effective in the influence which we leave upon those who come after us. When, once for all, we thoroughly appreciate this, how careful do we

become of the manner in which we spend the time we have to live; how anxious to do the most good we can whilst we have the opportunity. Such opportunities you as medical men will have in a larger degree than perhaps you could have in any other position, for your lives will be spent in work which is eminently productive of good. If, however, I were to tell you that every man who has left the various hospitals in this town with a licence to practise was a benefit to society, I should be telling you what is not true. I believe that a large majority of these have been; but in this, as in all other professions, there will be found some bad mixed with the good. You will notice that I speak in the past tense, for I wish to be understood to say that the members of the undesirable minority are now very few, and, belonging rather to the past than the present, may be well consigned to oblivion. Their propagation is restricted, not only by the increasing standard of professional knowledge insisted upon by the examining bodies, but especially by the higher degree of preliminary education required by the Colleges of Physicians and Surgeons. It is a matter of congratulation that this is so, for the profession of medicine is in consequence taking a position which it could not do when it was possible for the uneducated and ignorant to become enrolled amongst its members (for undoubtedly it was so until recently), and possible for them to be portrayed and caricatured with any semblance of truth (as they were) by the novelists of a past generation. If there is a danger in this bettered condition, it is lest the standard for admission into the profession should be placed too high by the examining bodies in subjects which have no direct bearing on practical matters. For it must be remembered that there are two distinct classes who pass through the hands of the examiners: there are those who will, as hospital physicians and surgeons, become teachers, and for these it is manifestly important that their knowledge, for example, of physiology and pathology, should be at the same time most extensive and minute; we know that whilst a considerable part of *their* future will be spent in scientific investigation, in the case of the greater number of candidates for a diploma such opportunities will not be present, and *their* time will be employed in the ordinary laborious duties of medical men in populous, and perhaps poor, districts. For such men, whose whole period of study includes about four years, their stock of information should be of as practical a nature as possible; and to require that they should be conversant with the most recent views of German physiologists and pathologists, of comparative anatomists and embryologists, is to encourage the expenditure of time spent in reading, which should be employed at the bedside of patients, and is likely to produce a race of book-taught doctors, who will be found incapable of treating an ordinary case of illness or injury. For the present, however, I, for one, am prepared to do justice to examiners in believing that they endeavour to demand proof of knowledge acquired by observation, rather than the elaborate statement of facts given in answer to their questions. I may now briefly say that the course of instruction in this school will be divided into two parts: the first, or groundwork, consisting of the sciences, which include anatomy, physiology, and chemistry; the subjects of the second being the study of diseases and injuries, and their treatment. The first will occupy some two or three years; the second, which commences after the first year, will extend over the remainder of your lives; for in regard to disease we are all students, the eldest no less than the youngest amongst us. It is sufficiently obvious that the latter portion of the subjects can never be completely mastered if the former be not thoroughly learned; but if I feel very lightly the importance of urging this necessity upon you, it is because you have joined a society where industry is the habit of the students—where, I am happy to say, the students as a body would compare favourably with the young men at any of the universities, not only as to diligence, but as to their general education and behaviour. Those whose memories will carry them back some twenty or thirty years will bear me out in saying how much improved as a class are those who betake themselves to medicine for an occupation. And the causes to which I have alluded are mainly responsible for this change.

If your choice of a career in the future is very wide I would even have the choice made wider, if possible; and I take this occasion to direct attention to what I venture to regard as a mistake in the system of scientific education as pursued in this country. In the first place, it will be admitted that the faculty of teaching is possessed by some in a far greater degree than it is by others. How some teachers are able to render their subject interesting to the students was simply and eloquently referred to in the last Hunterian oration by an orator who was unconsciously not aware that he in his teaching adds a charm to anatomy such as I have never known surpassed. It was impossible for me to hear him without thinking of the way in which I, amongst many of us, have seen him give bright illustrations to facts connected with the bones and the parts before him in such a manner that their details became firmly impressed on the memory. In the second place, according to present arrangements, the teaching in anatomy and physiology is carried on by the physicians and surgeons attached to hospitals where such subjects form part of the course of instruction. When these teachers become engaged in private practice the largest part of their time is spent in attending to their patients at home and at the hospital. By and by surgery occupies the time that was given to anatomy, and physiology is forsaken for medicine. Now, if the teaching of physiology were made a business of itself, the professor would be able to spend his whole day in the physiological laboratory and the lecture theatre, giving demonstrations on the dead and living tissues, and, above all, devoting a portion of time to research. The professors could be selected at first from amongst the lecturers at our hospitals; they should be paid salaries sufficiently large to induce them to give up private practice, and to devote themselves exclusively to the subjects which they have to teach. They should have under them assistants and demonstrators, proportionately paid; these would in time succeed to the professorships. Thus, not only would the subjects be better taught, not only would science make better progress, but there would be an opening for those whose tastes lead them to the pursuit of science as an occupation, rather than to the practice of our profession as generally followed. I have chosen physiology as an example, since a plan similar to this has been eminently successful at Cambridge and elsewhere, but the same remarks would apply to anatomy, and perhaps to pathology. In chemistry such a necessity has been partially recognised. Two or three schools upon this principle, with professors and an efficient staff of assistants, would be enough for the requirements of London, and the students could, as before, pursue their clinical work at the hospital to which they had entered. It would not then be necessary for everyone to become a student in medicine in order to obtain a good practical scientific education. You will perceive that I value this very highly, for it is one in which the student learns facts for himself. In every system of education in which natural science forms no part of it, whatever knowledge the pupil gains is acquired from what he reads or from what he is told, and the truth of facts so presented to him he must take either upon trust or, in so far as they can be demonstrated to his reason, by logic or mathematics. In the study of natural science, on the other hand, he sees, he feels, he hears the same fact repeated again and again under the same conditions; and his informant is Nature—Nature, who never errs. Which is the better mode of acquiring information? Which information is the more likely to be true, to be the more worthy of trust, and safer to be acted upon? These questions need no reply. We shall all agree that one of the most important elements in education is English literature, and certainly in this department history must be included as not the least useful and delightful. But consider for a moment how entirely different, as a force in mental culture, is the information acquired by learning anything in science or in history. Take for example, the character, or even the acts, of Mary Stuart. Although the events in her life occurred only some 300 years ago, I dare say I could find amongst the students I am addressing as much difference of belief in many of her recorded actions, and certainly of opinion in regard to her character, as on any subject I could raise. To do this it would only be necessary to select a student fresh from the reading of Mr. Froude's history, and another who had derived his impressions from earlier histories, and had not laid aside the romance with which Scott's novels have surrounded this queen. Mr. Froude's references to existing documents may be sufficient to induce me to receive his facts for purposes of history, but accept his accounts as much as I will my belief is of a very faint sort if I compare it with anything I have seen for myself. Viewed in the light of actual knowledge the facts derived in the two ways have a different kind of value to me, both no doubt good in themselves, but still

widely apart. With all due respect to the authorities at our old universities, I cannot but think that the time will come when the elements of physiology and chemistry will be considered as valuable a method of mental training as the production of what are fancifully termed Latin verses, as the study of the traditional records of Jewish history, or the learning by heart of sentences from Paley's Evidences. In the work which you now propose to undertake you will require no one's evidences but those of your own senses, and any statement from your teachers you will be able to subject to such tests. In whatever degree you do this your studies will be useful; when once you omit this they will be feeble and barren in their results. When you read or are told that an artery pulsates, that it is composed of so many coats, each possessing peculiar properties and uses, you will see and feel the artery to beat, you will examine its coats, you will see their properties exemplified in life, in death, in health, and in disease: in health when it is divided by the knife, or tied to arrest hæmorrhage; in disease when it is the seat of aneurism and other changes. Of what service would it be to you to read of all this? You would be better almost without such miserably insufficient information. Besides, what you read may not be true; you will decide for yourselves whether it is or not. If you wish to see the result of an education which makes a man arrive at an opinion accurately, act boldly, display manual dexterity, and effect good results, you may see it in any of the surgeons whilst deligating an artery to cure an aneurism. Again, supposing you to have made yourselves acquainted with the most complete account of typhoid fever, and simply to have supplemented what you have so learned by looking at any number of cases, and hearing what others have to say upon them. Until you have tested for yourselves the truth of all that you have heard or read about the disease, your knowledge would be worse than useless, for you might fancy that you know something about it, and, armed with such conceit, have the effrontery to take charge of a patient so suffering. When you have seen patients every day from the beginning to the end of the fever, have taken the temperature of their bodies and noted its variations, become so familiar with their pulses that you recognise the period at which it may be necessary to administer stimulants, examined the excretions, watched the changes in symptoms, noted the effects of treatment, observed every detail in diet and nursing, made yourselves acquainted with the affections which the fever leaves behind, witnessed the modes of death with patients who do not recover, examined the post-mortem changes in those who die from it, and, lastly (most important of all) have discovered the source from whence the fever arose,—if you have done all these things, your knowledge of the subject will be real, and you will have learned that though books have their uses, they should in science and medicine be only used for the purpose of directing attention to what is to be looked for, and as a means of comparing the observations of others with your own. Thus far, then, books may be relied upon and no farther. If this be so, the very essence and goodness of a scientific education is lost when a student endeavours to pass his examinations by learning from text-books what he should have taught himself by observation, and from pictures what he should have learned from realities. Those whose information is so gained have seized the shadow instead of the substance, and their work will for ever bear the marks of their indifferent education.

The results of the two modes of acquiring knowledge will be seen in the different classes of practitioners which they respectively produce. In the first order is the physician who intelligently studies physiology, who recognises in pathology what I would for the moment call an eccentric physiology; who says to himself when contemplating disease, "I here see such and such organs of the body out of order, such and such functions imperfectly performed; let me try to place these organs at rest, so that they may recover themselves (where recovery is possible) and perform, perhaps, in time their functions as heretofore"; who appreciates that in pneumonia the tendency is towards recovery when not interfered with, if the patient's strength is so supported that he can tide over the period during which the lung recovers itself; who sees in typhoid fever the same necessity for support, with the additional one of resting the intestine until the ulceration has time to heal; who, in the case of diseased kidneys, rests these organs by putting their work on to other organs, such as the skin and intestines, and allows no food which requires the special exercise of the kidneys for purposes of elimination. Similar management with other diseased organs. Here knowledge of physiology precedes knowledge of disease, and disease means to this physician disordered physiology. How different from the meddlesome apothecary of not long ago—never easy without he was pouring his medicines into his patient every few hours, having for every symptom a fresh drug which added to his patient's difficulties, and for every pain some outward application which increased his discomfort. Now, his modern counterpart is he who has learned chiefly from books and untrained observation what he knows of disease; for, please observe, that constantly seeing patients by no means implies that the faculty of accurately observing has been attained, and if this faculty is not acquired by a man early in life he will blunder on into old age. Such an one does much the same as his predecessor in a milder way when his first consideration takes the form of the inquiry, What is a good medicine for this, and what for that? He knows what will cure something or other, and so prescribes it. So well is what I am saying beginning to be understood that the very expression "cure," unless applied with a special meaning as to an aneurism, a hernia, or the like, has become almost offensive, and will ere long be used only by the ignorant and pretentious. The physician does not pretend to cure his patients; he places them in the conditions most favourable to recovery, and is thus often the means of averting death and conducting them to health. You must not think that I am underrating the value of medicines; a large number of drugs we know well to be most useful and often necessaries in the treatment of disease, but the practice of ordering medicines to every patient who applies for relief is no longer the practice of physicians, although, perhaps, it may be followed by those who would on occasions be the last to resort to it, if they had the courage of their opinions. But pathology is better understood than it was a few years since, and with a more complete knowledge of morbid processes has come a corresponding knowledge of the frequent inability of drugs to control them; add to this that with a fairly intelligent patient, the man who possesses an intimate acquaintance with the morbid change which produces the symptoms, has the power of explaining his disease to him, and so successfully insisting upon the requisite conditions for treatment, irrespective sometimes of little, if any, assistance from drugs,—such a knowledge cannot be attained without a thorough scientific training, and I could multiply examples where this kind of education is as useful as it is to the physician.

At the risk of being tedious, I cannot help repeating that the mental training which encourages the habit of careful observation, of accumulating facts, the reality and truth of which are tested by experiment, which sweeps away opinions based upon imperfect premises, which succeeds in leaving upon its pupil a profound regard for accuracy in all his work, must be a valuable addition to any course of education,—an addition, for I should be sorry to urge that it was a complete substitute for any branch of knowledge except it be philosophy and metaphysics. How science has superceded philosophy was well told by George Henry Lewes when he wrote: "The method of verification, let us never forget, is the one grand characteristic distinguishing science from philosophy, modern inquiry from ancient inquiry. The proof is with us the great object of solicitude; we demand certainty, and as the course of human evolution shows certainty to be attainable on no other method than the one followed by science, the condemnation of metaphysics is inevitable. Philosophy was the great initiator of science; it rescued the nobler part of man from the dominion of brutish apathy and helpless ignorance, nourished his mind with mighty impulses, exercised it in magnificent efforts, gave him the unslaked, unslakeable thirst for knowledge which has dignified his life, and enabled him to multiply tenfold his existence and his happiness. Having done this, its part is played; our interest in it is purely historical."

I have only to add to what I have said that if your choice of a profession should be the means of your acquiring the character of mind which in my imperfect way I have endeavoured to describe, you may indeed consider yourselves happy in your selection. I would rather say this than congratulate you on having joined what has sometimes been vulgarly described as a noble profession. Productive work of all sorts is good, and whether it be done in the pursuit of science, in the advancement of art, in the practice at the Bar, in the duties of the Church, in the gallant defence of one's country, the man ennobles his profession or makes it

ignoble by the way in which he pursues it. It is for us to make such an eulogy possible, and to await the verdict from without rather than pronounce it upon ourselves. I feel how incompletely I have expressed what I have wished to say, how differently the subject might have been treated by a more able lecturer than myself; but the very writing of this short address has served to bring more forcibly to my mind, if possible, that the value of all education should be measured, not by the power which it gives of achieving what is commonly called success, but by the influence which it lends to any sort of work a man may do, by its secondary influence upon all with whom he may be brought in contact; lastly and chiefly, by its effects on his thoughts and happiness. Surely on such things more often than on circumstances depends the amount of satisfaction which we can extract from our lives. Let me ask you then not to look on your studies as merely the means of qualifying yourselves for your profession. Let them be pursued for their own worth, and that the truths which they cannot fail to give may be yours. You will then be something more than successful; you will be good men and true.

Abstracts
OF
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DELIVERED AT
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AT THE
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QUEEN'S COLLEGE, BIRMINGHAM.

INTRODUCTORY ADDRESS BY DR. JAMES SAWYER.

To train medical students to become medical practitioners and to pass certain examinations which are the legal tests of their fitness to practise are the functions of a medical school. The former function, the higher of the two, although you may not now so estimate it, can be measured by no easily defined standard; but it embraces many subtle and most powerful agencies—what may be called the "tone" and "surroundings" of the school and the moral influence, example, and personal qualities of its teachers. But the way in which a medical school fulfils its second function—that of fitting students to pass the qualifying examinations—can be readily tested. The Royal College of Surgeons of England is the body from which most of the medical students of England obtain the right to practise as surgeons. The Council of that College has published some interesting and important statistics of its examinations. If we examine the last published of these statistics, showing the absolute and relative numbers of students who have passed or who have been rejected from each medical school, for the primary and pass examinations for the diploma of member of the College, during the academical year 1878–9, we shall see that the teachers and pupils of the Birmingham School have abundant reason to be proud of their work. Taking the primary examination and comparing the results therein attained by our own school with those of the eleven schools of London, and also with those of the seven English provincial schools other than our own, I find that the highest metropolitan percentage of rejections is 48·5, the lowest 18 per cent. The average of the rejections from the medical schools of London is 30·3 per cent. For the same examination the percentage of rejections from the Birmingham School is only 15·7; less than a third of the largest and worst metropolitan percentage, a very little more than half the average of the London schools, and 2·3 per cent. lower and better than the lowest and best percentage attained by any London school. For this examination, too, the worst English provincial percentage of rejections is 48·75; the average is 32·3 per cent.; the best is that of the Birmingham School—namely, 15·7 per cent.; not half the average. An examination of the statistics of the pass examination is scarcely less satisfactory. The highest metropolitan percentage of rejections is 38·3, the lowest 23 per cent. The average of the rejections from the schools of London is 31·3 per cent. For the same examination the percentage of rejections from the Birmingham School is only 17·5 per cent.; 13·8 per cent. below the metropolitan average, and 5·5 per cent. lower and better than the lowest and best percentage attained by a London school. For this examination the worst English provincial percentage of rejections is 53·3; the average is 35·6 per cent.; the best is that of the Birmingham School—namely, 17·5 per cent.; again not half the average. Comment on these facts is unnecessary; they show, among other things, that excellency in these matters does not altogether depend, as some would seem to think, upon geographical conditions.

Before I pass on to the second part of my theme, I would notice, in passing, a question which for medical men and medical students is now a "burning question." Let us hope we are now on the eve of important changes in the method and management of the examinations of the licensing bodies, notwithstanding the lamentable indifference of the Government, the selfish and short-sighted opposition of the Scotch universities and colleges, and the amazing stupidity of the Medical Council. If I mistake not, the general voice of the profession demands that the constitution of the Medical Council be recast, that that august body develop into something more than a debating society, that its functions be forthwith quickened so that it may at last, after a hibernation of twenty-one years, do something to guard the rights and regulate the responsibilities of medical practitioners, and that what are called the "portals" of the profession be consolidated—we want fewer doors and more windows. The absurd multiplication of licensing bodies in the United Kingdom, and, in many of these the undue multiplication of licences, the great differences which have existed in the length and character of the curricula and in the number and stringency of the examinations of the various corporations, combined with the fussy inactivity of the Medical Council, have long afflicted medical students and the profession generally, no less than the outside public, with evils whose harm it would be as difficult to measure as to exaggerate. There is not now before you, unfortunately, a definite set of examinations which you cannot shirk, if you would, if you would enter our profession, and in preparation for which you must regulate and direct your various studies in due order as to extent, proportion, and succession; but you are bewildered by the choice of "portals," which make unequal demands upon your time, your energies, and your pockets, determine in varying degrees your subsequent professional status, fit or unfit you for the highest or lowest professional offices, and some of them so accommodating that you may look forward to entering them if in the end you should fail to pass or fear to approach their more exacting rivals. Can we wonder at the confused notions which possess the public as to what is connoted by a qualification to practise? At this moment, in the United Kingdom alone, there are no less than nineteen corporations chartered to confer medical degrees and diplomas. And such is the activity of these bodies that, exclusive of certificates in obstetrics, sanitary science, and dental surgery, in London there are given eleven, in the provinces of England ten, in Scotland nineteen, and in Ireland thirteen medical qualifications, a grand total of fifty-three licences to practise, the possession of any one of which entitles its holder to registration and the exercise of the privileges of a medical practitioner. Surely we have borne these evils long enough. Surely it is incumbent upon every member of our profession to do his best to secure their removal. All honour to those who have so long worked amongst us, in spite of official discountenance and delay, to effect a reform which cannot now be distant. Let us hope we shall soon see the Medical Council reconstituted with fuller powers upon a broader and a juster basis, including representatives of our medical schools and of the profession generally as well as of the corporations, framing rules for examinations, and enforcing punishment on those who practise without authority or unworthily, and the universities and colleges of the land—still preserving their powers for supplementary admission to the higher professional qualifications—united in a real conjoint scheme, providing a well-balanced minimum standard of examination for a licence to practise, uniform as to curricula, stringency, and fees in all divisions of the kingdom.

In your curriculum in this College I hope you will find abundant opportunity for gaining a complete knowledge of the subjects prescribed for your study by the licensing

authorities. Each of these subjects must be studied and practised separately if you would gain a clear conception of it; but they reciprocally support each other; they are supplementary and ancillary to each other; their boundaries are interlaced. You must set yourselves to acquire a knowledge of them all, both in their general and practical developments, if you would fully understand the science and intelligently practise the art of healing. These subjects are anatomy, physiology, chemistry, botany, materia medica and therapeutics, midwifery, pathology, medical jurisprudence, surgery, and medicine. Each is a science, and each science has its cognate art. A science is systematised knowledge, an arrangement of the leading principles or general truths relating to a given subject; the art which depends upon and flows from this science consists of the rules of practice and the practice of the rules founded upon the principles of the science. A science has to do with knowing, an art with doing. You must learn each science in order to understand its correlative art; you must practise each art if you would illustrate and appreciate the principles of its science. We teach you to employ four methods of study, no one of which you can safely neglect; you are required to attend lectures in which the principles of each science are set forth, explained, and illustrated; you are required to read for yourselves systematic treatises on each subject; you will have tutorial expositions of your studies by our medical tutor and demonstrators; and you will be required to apply your hands to practical work in the dissecting-room, in the museums, in the fields, in the chemical and physiological laboratories, and in the dressing-rooms, wards, and mortuaries of our hospitals. I cannot now attempt to urge upon you either the positive or relative claims of each of the several medical sciences. But let me tell you you must become good anatomists. Anatomy, unlike chemistry, physiology, and pathology, is now, excepting in its histological developments, a complete science. You must master it thoroughly; you can have no excuse for remaining ignorant of any detail of naked-eye human anatomy. If you would practise our profession in any of its branches with a tranquil conscience you must know anatomy. Whatever you have to do for the relief of the sick and suffering you cannot do it best without anatomy. Anatomy is the common ground of the physician and the surgeon; it is the very corner stone of the medical sciences. Here, too, you must equip yourselves with a serviceable knowledge of chemistry and physiology. It will be his own fault if any of you leave this College and be not a sound anatomist, a sound physiologist, and a sound chemist. And here, too, guided by our distinguished professors of medicine, surgery, and midwifery, you must so learn the principles of those sciences that you may appreciate and intelligently share in their application at our hospitals, and thus complete your academic training as sound physicians, surgeons, and obstetricians.

I would urge you, with all earnestness, to be diligent in your attendance upon hospital practice. You are required to attend this practice regularly from the very beginning of your course; from the very beginning I say, for the time before you is all too short for the work you have to do. During the first half of your curriculum hospital practice, which then ought to occupy only a short part of each morning, must, on no account, be allowed to displace your collegiate studies in preparation for the earlier professional examinations of the licensing bodies. The greater part of the first two years of your studentship must be spent in preparation for these examinations. When you shall have passed these primary tests of your knowledge in anatomy, physiology, chemistry, materia medica, and botany, when you shall have studied the marvellous structure of the human body and learned something of its healthy development and working, something of the chemistry of the vital processes, and something of the therapeutic preparations commonly used in medicine, you may allow prominence to your hospital work, avail yourselves fully of your great clinical opportunities, and take an active and intelligent part in the relief of pain and the care and cure of cases of injury and disease. Your training must first be mainly scientific and then mainly practical. You must learn the principles of the medical sciences before you can appreciate and apply intelligently the rules of art which those principles supply. By your hospital work I do not mean attendance merely upon hospital practice, but your individual participation therein. If you do your duty in that practice, you must take some active part. You must all hold dresserships and clerkships. If you spend three years in your curriculum, at least your last year, and if your course of hospital attendance extend to four years, as it ought to do at least, at least your last two years should be spent continuously in one or other of these offices. You must not rely too much on clinical lectures and demonstrations. I am sometimes afraid we have rather too much of these good things now-a-days. Nothing must divert you from your own particular work. No amount of reading, no lectures, however able, no demonstrations, however attractive, can teach you to recognise the crepitus of a broken bone, the cachexia of cancer, the crepitation of pneumonia, the fluctuation of an abscess, the rub of pleurisy, or the murmur of a damaged heart. If you would do justice to the ample opportunities which our hospitals afford you for obtaining a competent practical knowledge of your profession, these are amongst the things your own fingers must learn to feel, your own ears must learn to hear, your own eyes must learn to see, in your close personal observation at the bedside of the sick and suffering.

I hope a genuine and unalterable love of science, a humane and abiding enthusiasm, and an honest desire to earn your bread in the work of an honourable profession, are chief among the feelings which have guided the choice that brings you here to-day. Remember, you have chosen a calling carrying with its practice responsibilities which are often more pressing, more personal, more direct, and more undivided than attach to the pursuit of any other profession. If you would duly fit yourselves now for these responsibilities, which must come upon you hereafter when you pass into practice, you will seriously and constantly strive to make the most of your educational opportunities for the acquirement of professional knowledge and professional skill. But howsoever extended your knowledge, howsoever great your skill, you cannot discharge these responsibilities aright unless you continue to train your hearts in courage and your minds to pure and lofty purpose. Bearing your responsibilities manfully, I would that you should pass from this school with a due sense of the dignity and worth of your calling, not with a contracted and contemptible class conceit, but with broad human sympathies, tempered with that just professional pride which is one of the strongest incentives to sacrifice for any work which tends to foster professional unity or to raise our calling in public usefulness or esteem. Such a professional pride is the surest safeguard of professional probity.

LEEDS SCHOOL OF MEDICINE.

INTRODUCTORY ADDRESS BY MR. EDWARD ATKINSON.

AFTER a brief retrospect of the origin of the principal examination boards in England, the lecturer said:—At the present moment intending students and their parents are bewildered in the attempt to make choice among the many corporate bodies as to which qualification is to be aimed at, for they soon learn that the requirements for their several examinations vary considerably; that not only the standard of excellence demanded is very different, but that the amount of attendance on classes is greater for some qualifications than for others. Now, should the new Bill become law much of this perplexity would be done away with by the establishment of a conjoint board, whose examination—sufficiently high in standard to be a real test of the candidates' proficiency—would be uniform throughout the whole kingdom, and admit men to the exercise of the profession with a diploma equivalent to the two which are now necessary for the double qualification in medicine and surgery. Whilst this pass examination would thenceforward be all that was needful to enable a man to practise, it would not, of course, prevent any who were anxious for further distinction to graduate in either branch of the profession at one of the universities, or to acquire the diploma of membership or fellowship of any special college or corporation. In the case of intending graduates, however, it would still be necessary, as now, that their decision should be taken from the first, because all the universities (except London) require the student to spend more or less of his time of study in their respective schools; while in the case of the University of London, though no residence is required, there is a preliminary scientific examination, which, as well as the matriculation, ought to be passed before beginning professional study. I say "ought" advisedly—for many students

make the mistake of attempting it after entering a medical school, only to find that they are overwhelmed with a multiplicity of subjects, and too often also that in trying to do two things at once they have done neither well. It is indeed devoutly to be wished that those purely scientific subjects, certificates of attendance on which are required by various bodies, such as inorganic chemistry, biology (including botany and zoology), and physics, should in all cases form part of the preliminary general education and examination, and be dispensed with before commencing the special study of human anatomy and physiology, instead of being included, as some of them now are, in the first summer courses. This desired reform is even now under consideration, and will afford, let us hope, one of the simplifying elements in the curriculum of "the good time coming." Were these impediments removed from our programme, what valuable time should we not gain in winter for practical anatomy and dissections, and in the summer for practical physiology and the histological use of a microscope. Besides, the continuance of dissection through the summer session—the inconvenience of which, and all objection on sanitary grounds, are now overcome—might with great advantage be made the rule instead of the exception. For there can be no doubt that the two winter sessions which a student has for the learning of his anatomy before presenting himself for his primary examination are, even for the most industrious and energetic, barely sufficient in these days, when the summer intervenes, with its new subjects, to distract, and the long vacation to divert his mind, and so give him six months in which to forget all he has learned.

The question has been recently asked, "Is it desirable that a certain period, previous to admission to a medical school, should be spent (by an intending student) with a general practitioner, in the form of an 'articled pupilage?' If so (*a*), how long? and (*b*) which of the preliminary scientific subjects of study should form part of his training?" Now this question appears to indicate a feeling that we have lost some good thing by the abandonment of the old apprenticeship system, and to suggest whether a partial revival of it might not be made to fit in with the preparation for a preliminary examination in science. But I venture to think—and most medical teachers, I fancy, would agree with me—that it would be beginning at the wrong end. For, first, the majority of students enter a school of medicine within a year after leaving school, and, unless these science subjects have been included in their general education, they will want the whole of their time during that year to get them up, without any distraction from assistant's work. Next, if tutorial aid be needed, why seek it at the hands of a general practitioner, whose time is probably engrossed by his profession, to say nothing of his questionable fitness to act as a science-master many years after those subjects have ceased to occupy his mind. And, thirdly, what useful purpose can be served, either to the articled pupil or his master, to say nothing of his patients, by setting a youth fresh from school to compound medicines before he knows anything of practical chemistry or the properties of drugs; or placing him in the false position of having to fill a gap at a case of midwifery, without the most elementary knowledge of anatomy and physiology? Until he has passed his "preliminaries," and has been duly registered as a medical student, there can be no doubt that home is the best place for him. And if then he be placed with a medical man, it should be simply that he may enjoy the privilege of a settled residence, and the advantage of such counsel and assistance in his studies as his house-master is able to give him. No assistant's work, however slight, should be expected of him until he have concluded his second winter, and passed his primary examination in anatomy. However possible it may have been to combine the two in former years, when this examination was comparatively lax, it is certainly all but impossible now, when the test is so severe that a man's whole time is required for school work, hospital and private reading, so as to enable him to go up with comfort to himself and the confidence of his teachers that he will pass. While, therefore, as we know is the case, pecuniary circumstances may compel some men to take assistant's work before completing their studies, I would strongly advise none to do so until they are safely through the first portal.

It has long been a reproach to English medical students that so few of them graduate in medicine and surgery, compared with the proportion of those who do so in Scotland and Ireland. Nor has the explanation been far to seek. The length of time required, the necessity for residence, and consequent expense, at the older universities; and in the case of Oxford, the further need for graduating in arts before taking a medical degree, will abundantly account for it. The University of London, whose charter dates from 1836, was intended to meet this want by throwing open its degrees to all who had matriculated there, no matter where their subsequent education was completed. But so numerous and difficult have the examinations been made that, notwithstanding this concession, those only who (as was well said the other day) combine the rare advantages of having the best heads, the longest purses, and the most time, can aspire to what is justly styled the "blue ribbon" of the profession. Under these circumstances it may be supposed that the recent announcement to the effect that the Privy Council were being memoralised to grant a charter for a new university for the North, which among other things was to confer medical degrees, was hailed by many as the harbinger of good news, and that the deficiency so long lamented was about to be supplied. It was expected that a scheme which emanated from so great, noble, and liberal a body as Owens College at Manchester, would be characterised by a generous desire to assimilate its plan to that of the German universities, in so far as freedom to all comers is concerned. But, as Jupiter condescended to court Danaë under the similitude of a golden cloud, so the Manchester Jove so successfully enshrouded his advances in mystery, that his *inamorata* never recoguised his true divinity till she was about to be embraced. Then it was discovered that the blandishments of the god were not quite so disinterested as had been imagined. It was found not only that the powers sought by the Victoria University would limit their degree to the students of schools affiliated with her, but that the terms of affiliation were such as could not for many years to come be complied with by any other school than Owens College. In other words, the college stood declared as the university. Let it not be supposed that the provincial schools, in the almost unanimous opposition which they have offered, and offered successfully, to the claim of the Victoria University to grant medical degrees, are actuated by "jealousy" of that great and distinguished school. True it is that they have motives of self-preservation which they are perfectly justified in maintaining, and which they are not ashamed to own. Strange would it be if, after generations of good and honest work, they should tamely lie down and allow Owens College or any other scientific Juggernaut to ride over their heads. But we are all fully alive to the need of a free and popular degree in medicine and surgery, and whenever such can be granted by a university which invites candidates from all duly-recognised schools of medicine without imposing unequal terms of affiliation, then will the whole English profession unanimously hail a reform so benignant to its members and so advantageous to the public.

We are accustomed to be reminded of the superior enlightenment of the age, and of the increased rate of the march of intellect. Both sayings may be true in many ways, and receive illustration from day to day in politics, in social science, and various branches of contemporary history. But if true in many things, they suggest much that is in contrast strange and unaccountable. Next to the wonderful fertility of invention in physical and mechanical science which marks the present day, and the numberless applications of scientific discoveries to our daily wants, real or imaginary, evidence of which abounds in any of the exhibitions of arts and manufactures that have become so popular of late years; next, I say, to these, there is perhaps nothing more strikingly characteristic of our times than the activity manifested by men of science, and particularly medical men, in the investigation of sanitary problems, devising methods for the remedy of insanitary conditions and the protection of the public health. Qualifications in State medicine have been established at several of the universities, but the Local Government Board has not yet made the possession of this qualification compulsory upon their health officers. Inspectors of nuisances are appointed, but their unavoidable relations with public contractors often neutralise their utility. Smoke inspectors, too, are appointed, but their hands are tied by official smoke producers, so that their informations against offenders too frequently end in smoke! Much good has been effected in our own town by the provision of a plentiful supply of pure water on the one hand, and by the purification of sewage on the other. But of what use is it to expel the fiend of sewer-gas from our homes only to be poisoned as soon as we go into the streets, or even put our

heads out of the window? The all-important subject of the ventilation of our main-drainage has yet to be dealt with. It seems to be forgotten that whilst it is the property of fluids to gravitate to the lowest levels, it is equally the property of gases, in closed tubes, to ascend to a higher. Or if the fact be remembered, instead of utilising it by constructing ventilation shafts where the drains terminate on the high grounds, our authorities ingeniously abuse the knowledge by tapping the sewer at convenient intervals in its continuity, so that the nostrils of the passer-by may be regaled at every gulley-grate, to remind him of the blessings of a paternal government. Thus it comes to pass that the higher you go the greater the nuisance—and the deluded ratepayer who selects his residence on some hill top, in the legitimate hope of enjoying fresher air and a healthier situation, is invaded the moment he opens the door by the quintessence of effluvium from a dense population! But sewers are not the only places where ventilation is required. Domestic dwellings are sorely in need of better provision in this respect. Into how many houses do we go, which have been built twenty years or more, and find the upper window sashes made to open? In modern houses this first essential is usually provided for; but in old ones it is very seldom corrected. Then how instructive is it, in these days of sanitary activity, to see our local authorities obtaining a new Improvement Act, enacting new building regulations, and promising us all manner of reforms in house construction, to be enforced by vigilant inspectors, yet leaving untouched that most abominably vicious system of back-to-back houses, than which, I do not hesitate to say, there is not a more fertile source of ill-health, nor a more cleverly devised trap for catching, and hotbed for propagating, infection.

LIVERPOOL ROYAL SCHOOL OF MEDICINE.

INTRODUCTORY ADDRESS BY DR. WALLACE.

IN selecting a special subject upon which to address you to-day, I have thought that, to an audience almost entirely composed of medical men, a general review of the advances in the department of medicine with which I am best acquainted, would prove more acceptable than mere discursive generalisations without any well-defined aim in view. But first let me point out that in the Royal Infirmary we enjoy peculiar advantages for the study of those subjects, for in 1862 the late Mrs. Thornton left £10,000 to build and endow two wards, called the Thornton, for the sole treatment of diseases peculiar to women. We have no Royal Infirmary Maternity, but the students will be pleased to know that arrangements have been made by which the practice of the Ladies' Charity and Lying-in Hospital has now become available, and as 2500 cases are attended yearly, it will be unnecessary for students to go to Dublin, London, or elsewhere for midwifery practice as they have hitherto, to a great extent, been obliged to do. We shall thus have enough practical work and to spare.

With reference to gynæcology, I fear we are too apt to boast that this department of medicine has only begun to be thoroughly investigated and understood in our time, forgetful of the fact that many of the so-called modern discoveries were known and practised among the ancients.

We all know the value of the stethoscope in the differential diagnosis of uterine and ovarian tumours from pregnancy, and that by vaginal stethoscopy the latter can be discovered at least a month earlier than by the abdominal methods. Nay more, we can, in like manner, discover morbid implantations of the placenta, and arrange for the subsequent treatment accordingly. Then, again, with reference to the uterine sound, there can be no doubt that its introduction marked the commencement of a new era in the diagnosis of uterine disease. To Simpson the credit is due, for although Lair in 1828, Wierus in 1657, Avicenna the Arabian, Aetius, and Hippocrates all speak of the sound for various purposes, he again gave it to the profession when it had been forgotten, and they received it from his hands. Where the exploratory limit of the finger ends, its use begins. Indeed, it is but a silver continuation of the former, and is used on the same principle as the surgeon's probe. Conjoined with that of the bimanual methods of exploration, we are enabled to diagnose the exact condition of the uterus, the patency and condition of its canal, its depth and size, and whether there is subinvolution or congestive hypertrophy. It reveals also its position, whether normal or abnormal, and its mobility, or fixity by adhesions backwards, laterally, or forwards in the pelvic cavity. The differential diagnosis of sessile or pedunculated submucous, and of intramural and extra-mural morbid growths, from ovarian tumours, extra-uterine pregnancy, hæmatocele, and peri- and para-metric exudations, with or without abscess, is greatly aided by the sound.

But probing the uterine cavity did not reveal, with the exactitude required, its true conditions, under morbid complications. Therefore Simpson introduced the sponge tent, with the view of dilating the canal of the cervix, so as to bring the uterine cavity into a condition similar to what exists after a miscarriage. By this means the cavity of the womb can be explored by the finger, and polypi and other morbid growths removed, or local treatment applied according to the requirements of the disease. Before this advance was made, in olden times, women bled to death's door, if, indeed, they did not often die from simple pedunculated intra-uterine tumours, which we now remove with the greatest facility and safety.

I need hardly mention the speculum vaginæ used by our predecessors long ages ago,—and yet so marvellously objected to, even up to our day, by some of the medical profession,—when we remember the immense advantages it affords us in diagnosis and treatment. The exploring needle, the microscope, the endoscope, and the thermometer, are all the products of our day. Without them we should feel very much at a loss, so much so that we wonder how our predecessors did their work without them. We have the advantage of greater exactitude, but at the expense of the risk of a loss of the training necessary to develop high perceptive faculty.

The discovery of the anæsthetic properties of ether and chloroform, and the introduction of the latter in this country into the practice of midwifery, gave a great impulse to gynæcological research. Tumours, of which patients believed themselves the subjects, were demonstrated to be phantom and imaginary, and a load which clouded their lives with miserable anticipations was removed from their minds. Conditions of extreme hyper-sensitiveness, which could not admit of the necessary exploration, nor even the most tender and gentle touch, could now be examined deliberately and carefully rectified. Many a patient hopelessly given up by the surgeon was called back and cured, and sent home to resume her position in her family and society. It is true that Dieffenbach had previously used the leaden ligatures and sutures, so had Dr. Mettauer, of Virginia, with success in 1830 and 1847, while Dr. Levert, of Mobile, had published experiments on the use of the silver wire in 1829, and Mr. M. Gosset described in THE LANCET for 1834, in language almost the same as that of Dr. Sims himself, how he closed a vesico-vaginal fistula by interrupted sutures. Yet these isolated cases do not lessen the credit due to the latter, for, from "his hands, the operation was accepted by the profession," and no improvements worth notice have ever been made since upon its operative details. But, in other directions, still further advances have been made in recent years in the methods of conducting plastic operations connected with the vagina. One of the greatest is the preparation of the patient. Formerly these operations were tedious and prolonged from the constant and often profuse bleeding. Waiting, plugging the vagina with sponges, ice, even packing it with snow, all not only failed to facilitate the work, but prolonged it indefinitely. I remember seeing Simpson perform a vesico-vaginal operation. It began at one o'clock. At two o'clock I had to attend Goodsir's lecture. After that I rushed down again to the infirmary, but I could see nothing except crowded heads stooping over the patient. It was still proceeding. I then hastened to attend Laycock's lecture, and when I returned at 4 P.M., I found they were just completing the operation by candle light! It was the incessant oozing of blood which delayed them, for I saw that the work was well done, and the patient made a speedy recovery. Since then, and before then, what operator has not had his patience tried in the same manner. We all know the effects of fomentation and hot poultices in reducing congestion and inflammation. For years I have used the hot vaginal douche for the same purpose, having discovered that cold injections often did harm, and could not

be tolerated by the patient; but it remained for Dr. Pilcher, of Detroit, to point out how the application of heat as a hæmostatic could be made. Dr. Emmet, of New York, at once took the hint, and now we find—as many of you have seen demonstrated in the Royal Infirmary—that the continuous application of the hot vaginal douche for an hour before operating—on the principle of the blanching action of hot water upon a washer-woman's hands,—and the use of hot sponges afterwards, will secure what may almost be called bloodless surgery. By these means, operations upon the vagina, vesico-vaginal and recto-vaginal fistula, operations for lacerations of the cervix, and ruptured perineum, can be completed in one-third the time formerly taken to do them.

In this country we are greatly indebted to Baker Brown for the establishment of the operation for ruptured perineum; but, even since his time, an advance has been made upon his methods. Now we can restore this part to its normal wedge shape, by what may be termed the flap operation and a proper arrangement of interrupted sutures, without the loss of any portion whatever of the vaginal mucous membrane.

In cystitis, one of the most painful, troublesome, and distressing diseases which the female suffers from, we can now more certainly promise relief and cure than formerly. We have taken the hint from this. When, after dilating the urethra, lithotrity fails, it has been found that if an incision is made into the base of the bladder, through the front vaginal wall, the symptoms are ameliorated, although the stone may not be then and there removed. By making a hole in the base of the bladder we ensure perfect rest to the viscus, and can apply approximate local treatment, and, when the diseased mucous membrane is cured, we close the opening as for fistula. In the same way we can cure cases of abscess cavity communicating with the bladder, a complication which was often formerly dreaded, as likely to have a fatal termination. Even fifteen or twenty years ago this treatment was not known.

So, again, in the treatment of inversio uteri of months or even years' duration a similar advance has been made. By continuous and properly adjusted pressure, by incisions, if necessary, and by manipulation applied on scientific principles, the displacement can be reduced. But, indeed, along the whole line discoveries have been made and disputed points settled. There is now little or no contention between the followers of the mechanical and the pathological or inflammatory schools or to the causes and treatment of flexions and other displacements of the uterus.

In the differential diagnosis of peri-uterine pelvic tumours greater precision has been arrived at by the labours of Bernutz, Matthews Duncan, and others, and our methods of treatment have been placed upon a more scientific basis.

In peri- and para-metric inflammations, in subinvolution, and hyperplasia uteri complicated with chronic catarrh, we have a powerful curative agent in the hot vaginal douche, to which antiseptics and astringents may be added if necessary. Intra-uterine treatment is also now better understood. Pure carbolic acid, fuming nitric acid as introduced by Dr. Kidd, of Dublin, and various other agents, can be applied in suitable cases to the lining of the uterus with safety and advantage.

Our knowledge of the growth and life-history of fibroid tumours of the uterus has much increased. We know that there is a tendency in all of these to become pedunculated, towards either the uterine or peritoneal cavity, from which they can be removed. There can be no doubt fibroids sometimes atrophy and disappear, and hence the ergotine treatment of Hildebrand has had many followers. I have tried it, without, however, obtaining favourable results, and I may mention, in the case of a submucous fibroid, two ergotine injections strangulated and killed the growth and also the patient. In the intra-mural growths of great size, and in epithelioma uteri in its early stage, the question of the removal of the whole uterus by gastrotomy will have to be decided in the near future.

In our day the most marvellous advance, however, has been made in the knowledge and treatment of ovarian disease. Slowly but surely, step by step, the methods of operative procedure have been attempted and put to the test of experience, and adopted or rejected, according to success or want of success. The operation, as a whole, has become simpler and simpler. The latest example of this is seen in the application of the antiseptic treatment—the Listerian method—which enables us to dispense with the clamp, and implies the utmost cleanliness.

Apropos of this I may mention that when I heard Mr. Savory in that magnificent oration *versus* antiseptics, proceed to tell the tale of a German professor, I whispered to a surgeon of this town, who was sitting next to me, that I did not think he dared to finish it, and he did not. The professor was Schroeder, of Berlin, and had Mr. Savory not stopped short in the middle of his story, he would have told us that after all his manifold antiseptic washings of patients, assistants, and of himself, Schroeder reaped from that date an almost unbroken series of successful ovariotomies; whereas under the old system, without antiseptics, nearly all his patients died after operation. To Lister the thanks of humanity are due for even greater things than that. He has, to a great extent, abrogated by his system the evils, I had almost said the horrors, of hospitalism. Hospital gangrene, with its death-roll necessitating the closing of wards and whole institutions, we never see now. Pyæmia and septicæmia become less and less. We know that at one time these endemic hospital pestilences not only baulked the best work and aims of the surgeon, but positively killed one half of the patients operated on. But as Apollo slew the Python with his arrows, in other words, as the sun shot his sunbeams and destroyed the pestilential mists and miasmata springing from the slime and mud after the subsidence of the deluge, so have these hospital plagues been destroyed by the Apollo of modern surgery.

SHEFFIELD SCHOOL OF MEDICINE.

INTRODUCTORY ADDRESS BY MR. SIMEON SNELL.

AFTER some preliminary remarks, and a few words of counsel to students as to the best method of pursuing their medical studies, the lecturer proceeded as follows:—

And now, gentlemen, I would, with your permission, pass on to a subject of medical science, requiring, I believe, more attention from the student than it generally receives. I mean ophthalmology. There are few of our medical schools—ourselves among the number—in which a course of ophthalmic lectures do not appear in the prospectus. None of the examining boards, that I am aware of, require attendance on these lectures, and thus it is that, not being compulsory, they are not so much taken advantage of as they should be.

A memorial from ophthalmic surgeons has recently been presented to the General Medical Council, urging the making of ophthalmology of more importance in medical studies, and if any further evidence were needed to demonstrate the inertness of the Medical Council in its present constitution, I think it might be found in the answers of the various examining bodies consequent on that memorial. The learned Mackenzie, it should be remembered, had presented a memorial of similar import nearly a quarter of a century previously.

Ophthalmology has, during the last five-and-twenty years, undergone a complete revolution. The discovery of the ophthalmoscope has rendered clear and distinct what was before unknown or little appreciated concerning many diseases. It possesses an extensive literature and a host of earnest workers, and to obtain a complete knowledge of it and its multiform operative procedures requires much laborious and continuous study, and can only be pursued by those specially impelled by aptitude, opportunity, or circumstance. Cases the subject of eye disease will, however, meet you in practice, though it may be not frequently, and what is urged is that the student should acquire such a knowledge as will aid him in the recognition of disease and its treatment. Nor, indeed, is this all. A study of it will beget in you habits of precision, as ophthalmology requires and compels accuracy in observation, and in one of its branches, that dealing with the anomalies of refraction and accommodation, closely approaches an exact science.

I shall next proceed to show how, in connexion with general diseases, a knowledge of ophthalmology is of importance. One of the most observing and erudite of the physicians of our day, Dr. Hughlings-Jackson, has said he considered it the luckiest thing in his medical life that he commenced the scientific study of his profession at an ophthalmic hospital.

The discovery of the ophthalmoscope—an Englishman's discovery, be it understood, though, by an ophthalmic surgeon's supineness in not recognising its value, reinvented by the

German, Helmholtz—by throwing a flood of light over a tract of waste and in darkness, produced an upheaving in medical science second only to Laennec's immortal contribution to our means of investigating disease. The optic nerve and retina being, as the history of their development demonstrates, portions of the brain projected as buds or vesicles towards the surface, the ophthalmoscopic appearances they present is necessarily of interest and value in cerebral disease. Thus may be mentioned the double optic neuritis, so frequently indicative of coarse brain disease as apart from the monocular neuritis of less serious import. And considering that intense neuritis may exist with little or no diminution of vision, the routine use of the opthalmoscope has been urged, and rightly so, in all cases of suspected brain lesion. This condition, without impairment of sight, is necessarily more frequently met with in physicians' than in ophthalmic surgeons' practice, but I imagine everyone seeing much of eye diseases must occasionally have noticed cases of this sort, as well as those in which the visible mischief seemed more than was accounted for by the actual loss of sight. Among the earlier symptoms also of locomotor ataxy, atrophy of the optic nerve has been observed.

It is not, however, merely in cerebral and spinal diseases that the ophthalmoscope is of general medical service. The retina, one of the most delicate structures in the body, seems peculiarly liable to become the seat of organic change, in consequence of diseases affecting other organs, or the blood itself. The list is a long one. Among the diseased conditions producing visible alteration in the retina may be mentioned those affecting the kidneys and heart, as well as the following:—Leukæmia, syphilis, hæmorrhagic diathesis, diabetes mellitus, pernicious anæmia, purpura.

It is by no means infrequent for patients perceiving failure of their sight to seek advice respecting it, and for the peculiar form of neuro-retinitis, with its characteristic white glistening patches and hæmorrhages, to be discovered, and the patient found for the first time to be the subject of Bright's disease, and this when other symptoms alone were not sufficiently prominent for recognition. There is, again, another kind of case in which the ophthalmoscope proves of service in kidney disease. Occasionally in a known subject of albuminuria sight may be suddenly lost. This condition may be what is called uræmic amblyopia, and would be recognised by the ophthalmoscope, and distinguished from the more serious lesion already mentioned by the absence of visible mischief, and the friends' anxiety relieved by a hopeful prognosis.

The discovery of apoplectic patches in the retina should be referred to as pointing often to grave apprehension as to the state of the circulatory system. Another condition also worthy of note is that of embolism of the central artery of the retina. The effects of the plugging of an arterial trunk or one of its twigs, thus plainly seen in the fundus oculi, are of importance as showing what occurs in consequence of emboli in other nervous tracts.

I pass by other interesting retinal indications discoverable by the ophthalmoscope, as well as the form of optic nerve lesion associated with the effects of tobacco and alcohol, of consequence as they illustrate the results of these agents on the nervous tissue, for time will not permit me to further enter upon them. Some few years since it was stated that the number of those using the ophthalmoscope in medical cases could be counted on the fingers of one hand. That this at the present time is no longer the case is evident, and now among the many workers at medical ophthalmoscopy are to be found those who, by their steady persevering labour, have made our knowledge of the subject what it is, and have left their names deeply imprinted on its surface.

Respecting the ophthalmoscope as "an arm of precision," one writer[1] some time since said, "Whatever may prove to be the practical value of the ophthalmoscope in detecting disease of the brain or spinal cord, it has for me this great charm—that its use must favour a spirit of industrious observation, and must favour also that wholesome disposition of mind which welcomes any facts, however far away they may seem to be from traditional doctrines and dignified theories."

It is not, however, merely with the use of the ophthalmoscope that we are concerned. I pass on therefore to the muscular apparatus. To ensure perfect vision, necessity exists in the eyes for their exact adjustment, to allow of impressions being received on a certain part of the retina. Any deviation from this is productive of derangement of vision. Here, also, on account of the symmetry of the two organs and their consentaneous movements, slight degrees of paresis of the muscles are noticeable, which in other and differently arranged parts might escape detection. The diplopia caused by these deviations is often accompanied by vertigo, more distressing often in those cases in which the paresis is observable only after careful examination. In estimating the cause in any case of vertigo, the possibility of its being ocular in origin should not be overlooked. The ready manner also in which the slightest disturbances in the third, fourth, or sixth cranial nerves can be recognised has been of signal service in the diagnosis of intra-cranial mischief. The association of a form of corneal inflammation with peculiar knotched and peggy teeth, indicative of hereditary syphilis, has been of use in aiding to assign to their proper cause ailments of doubtful character. Before I turn from this subject I must refer to anomalies of refraction. Hughlings-Jackson, in a recent address, mentioned cases with distressing head symptoms which were relieved by the correction of the refractive errors by the proper adaptation of glasses. Every ophthalmic surgeon must, I imagine, have met with similar cases, and be familiar with the relief afforded by the appropriate treatment.

The development of pathological inquiry has, it is well known, been fettered by our imperfect knowledge of healthy function. The manner in which the various ocular structures are open to inspection, and which is nowhere else attainable, has afforded it valuable assistance. I would refer only to the help gained to the pathology of inflammation by that process set up artificially or by disease in the cornea.

In this brief and thus necessarily imperfect survey enough has, I trust, been said to illustrate the value of ophthalmology to, and the influence it must have on, general medicine. I hope, moreover, I may be pardoned for making this digression from the ordinary routine subject-matter of introductory lectures.

To those students who are soon to commence the responsibilities of their profession I would now address a few remarks. I say students, and I trust you will always in reality remain as such. The love for your work, with which I hope you are all imbued, will induce you to be studious, and necessity will require it of every painstaking and industrious practitioner. So much is always being written, and so much is constantly being freshly brought forward, that, unless you desire to become rusty and to fall into the rear, reading and observation are requisites. The Hippocratic aphorism, also, "Ars longa, vita brevis," placed over our school, is ever a reminder that our life is but brief, and the occasion fleeting to learn, as we should do, our art.

Most of you will have imagined that all your troubles would cease directly your examinations were passed. No sooner are these safely over than you learn your error. The mode of your practice and the place where to commence in engage your anxiety. These are questions one cannot deal with for you; your circumstances must in every way be considered. Let us hope, however, that you have paved the way for practice by a term of residence in a hospital, or in some other way become familiar with the treatment of patients. All but a very few favoured ones will encounter hardships, difficulties, and trials at the outset, but not more than ordinary resolute courage can surmount. But I desire to impress upon you that directly you become legally qualified practitioners certain duties devolve upon you to the public and your profession. Now that State medicine is becoming more advanced, and public health affairs are demanding increased attention, you will probably be at various times appealed to on subjects relating thereto. Should this be the case, let your answers prove that your views on these all-important matters are clear and matured. To your patients it is your bounden duty to do the best your skill will permit in restoring or alleviating them, and to faithfully fulfil any obligations you may undertake. I am not, however, aware that we owe it to the public to ask of them as little remuneration as possible for our services, as some by their actions might lead people to suppose. I refer particularly to the style of practice sometimes adopted, under various guises, in which patients may be attended for absurdly low charges, barely adequate for the supply of decent drugs, and if such are used, not enough to provide the merest remuneration to the professional attendant. It is well known that the public estimate of a professional

[1] Allbutt: The Ophthalmoscope in Diseases of the Nervous System, &c., p. 6.

body, like that of individuals, is in great measure in proportion to the value they set on themselves, and thus it is that the reduction of medical fees to such infinitesimal ones, in these instances, will, if the practice be continued, be felt through the entire profession, and produce injurious effects. I have thus touched upon this subject, because, in commencing practice, temptations may beset you. I trust, however, you will cast them on one side, and discountenance any such proceedings as I have mentioned, as being injurious to your profession and of very questionable benefit to the public. In all your and our dealings with the latter let our conduct be characterised by straightforward manliness, and while remembering what is due to it, not forgetful of our obligations to our profession. May the words which Shakespeare puts into the mouth of one of his chief characters be each of ours—

"'Tis not my profit leads mine honour;
Mine honour it."

That the service, however, we render to individuals gains us little thanks, and in whatever we do we are considered merely as fulfilling our duty, is only too familiar. Nevertheless, many exceptions are met with, and we have in our own conviction that our best has been done—something far higher. The manner in which the State recognises services rendered to it by the medical profession has lately had a striking illustration in the case of Surgeon-Major Reynolds. Conspicuous for gallantry at the memorable defence of Rorke's Drift, being what it is the fashion to call a non-combatant officer, his meritorious conduct was passed over, while other combatant officers, no more deserving than he, were decorated with the Victoria Cross. True it is he has received the coveted badge, but only after his case was forced upon the authorities by professional opinion. All honour, I say, to the British Medical Association for granting him their gold medal for distinguished services, as well as to the Dublin University and the Irish College of Physicisns for recognising his bravery, and conferring honorary degrees on him.

Ours is, and should be, a profession of broad and wide sympathies. Our dealing with sickness, suffering, and sorrow all around makes it so. Let your communications with your patients be after this manner. Let it be characterised by kind consideration by word and deed. Human nature prostrated by sickness, while often particularly recognising such conduct, is only too conscious of the reverse. May you, therefore, be careful in the manner of your conversation, and rather cheer by kindliness than depress and aggravate a sufferer's sorrow by an ill-considered expression.

To our profession duties devolve on you and us. Directly you are enlisted in its ranks it not only merely demands of you that nothing be done by you derogatory to it, but moreover requires of you that your energies be given to the upholding and advancement of its interests. Each of us is but a unit in the professional body, and yet that unit is an integral part of which that body is made up. The nature of these units gives the character to the body. Each of us is, therefore, in his own particular way, able to do something, which by reacting on others, or by itself, will tend to advance the position of our profession. Your love of your craft should urge you to do so. But whether this be so or not, each of you can prevent himself doing that which can in any way be prejudicial to its interests. Concerning your relations with your professional brethren I would say a few words. It may be freely admitted that everyone should expend his full energies in the battle of life and the struggle for existence. The right to do so, on the other hand, devoid of regard for his fellows, may be morally questioned. Each of you owes a duty to his brethren. Each should exercise consideration and forbearance towards the other, and if the "do unto others as you would they should do unto you" principle was more felt and acted upon, questions on etiquette would seldom arise, and the numerous letters to the medical journals on the subject be unncessary. Remembering our own individual frailty, let us be ever willing and ready to make due allowance for the idiosyncrasies and peculiarities of others. Let an open, straightforward, and honourable course be the one you mean to pursue. Let all your dealings be done in the full light of day and aboveboard. And, after all, those most competent to form an estimate of your character are your peers, your professional brethren. Their opinion will react on the public, on whom you will be more or less dependent, and their idea of the confidence to be reposed in you will, in a great measure, be in harmony with this. A recent leader-writer in THE LANCET remarks, I think justly, that "men ostracised from the fellowship of their brethren in practice may be generally considered to be outside the bounds of confidence."

I have now, gentlemen, touched on a variety of topics. Had time permitted, several of interest still presented themselves. The agitation for more complete education and a more competent supreme authority in medical affairs has culminated in the present Select Committee on the working and constitution of the Medical Council and the unity of Examining Boards. Much has already been written on this very important subject, and one might have been tempted to add his quota to the discussion, believing as I do in the desirability of and necessity for legislation. But I feel I have already occupied your time and taxed your patience sufficiently. I thank you, therefore, for the kind attention with which you have listened to my address. Descartes I believe it was who said "that if ever it became possible to perfect mankind, the means of doing so would be found in the medical sciences." In conclusion, I would express the hope that you may find comfort and joy in belonging to such a profession, that success may attend you, and that some at least among you may become ornaments and excite the just pride and emulation of those around. Now is your opportunity for laying the foundation of all these, or by negligence courting the reverse.

"There is a tide in the affairs of men
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries."

And again—

"Men at some time are masters of their fate;
The fault is not in our stars,
But in ourselves, that we are underlings."

CASE OF POPLITEAL ANEURISM,

IN WHICH PULSATION RETURNED TWICE, AFTER CONSOLIDATION BY FLEXION AND THE LIGATURE RESPECTIVELY; EVENTUAL SPONTANEOUS CURE.

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LUKE C——, a dock labourer, aged thirty-seven, found in February, 1878, a swelling in his right ham, and within a week placed himself under the care of Mr. H. O. Thomas, who took him into his hospital. There was found a popliteal aneurism, having the estimated size of a large walnut, opposite the head of the tibia, pulsating with universal expansion, collapsing on compression of the femoral or external iliac and on flexing the knee. He remained there four or five weeks, during which period flexion and compression were alternately employed at irregular but frequent intervals, supplemented by hypodermic injections of morphia. The flexion was effected by connecting the ankle to the loin by a roller-towel, and adjusting this as circumstances required; the compression was done by tourniquets. The result was a gradual, but eventually total, consolidation of the aneurism, and a cessation of all its pulsation, on which the patient took upon himself to return to work almost at once. But there never seems to have been an obliteration of the artery at this spot; at any rate at the time of, and shortly previous to, consolidation, the artery could be felt pulsating down to the tumour, a short way *along and behind it*. There was also a pulsating vessel crossing the ham on one side of the swelling, as if one of the inferior articular arteries were given off at or close to the aneurism, and feeling enlarged to the size of a goose-quill. It thus appeared quite clear at this time that the aneurism sprang from the front of the artery, close to the upper margin of the tibia, and that it was sacculated. This portion of the case was several times witnessed by myself in company with Mr. Thomas.

On April 26th, twelve days after leaving this hospital, having knocked about, and finding pulsation had returned, he sought admission at the Royal Infirmary, where he was taken into Mr. Harrison's clinic, at that time in my charge. The pulsation was found to be universal, distensile, accom-

panied by a thrill on pressure with the hand. There was no bruit on auscultation, and the thrill disappeared on diminishing the pressure, being clearly due to compression of that part of the artery superficial to the aneurism. He was put to bed, and prepared for operation by the administration of a few saline aperient draughts, and given ordinary diet without alcohol.

On May 7th, under ether, the femoral artery was tied at the apex of Scarpa's triangle with a medium-sized carbolised catgut ligature cut short. A few subcutaneous bleeding points were tied with fine catgut. The wound was smeared with a little lard, and its edges left to fall together without stitches, being covered merely with a small piece of gutta-percha tissue. The limb was laid on a pillow and covered with a folded blanket, but no cotton-wool or bandaging was employed. A good deal of pain was experienced in the knee and leg all the rest of that day, and less and less for a few days after, when it ceased. For this hypodermic morphia was given at discretion. The progress of the wound, and other matters not relating directly to the aneurism, I give in detail at the end of this paper.

Pulsation ceased, and the aneurism became consolidated, gradually dwindling in size until it became a minute hard knot at the end of ten weeks. Pulsation, however, could still be felt in the popliteal artery down to the aneurismal remains, and so no real confidence was placed in this second apparent cure. For that reason the patient was asked to report himself constantly and frequently, which he did both before and after resuming his work in the middle of August. He worked off and on till the end of September. In the first week of October he felt his knee stiff; the aneurism was slightly reproduced and pulsating, though not clearly expansile. On Oct. 10th expansile pulsation could be felt, the aneurism had reached its former size, and the knee-joint was distended with fluid, which was drawn off at once (about three ounces, pale yellow). He re-entered the infirmary, under the care of Mr. Harrison, who kept him in bed, with an elastic bandage on the knee. The effusion in the knee (which returned after the single tapping) continued many weeks, but eventually disappeared. The aneurism continued unaffected for six months, and arrangements were just made for laying it open and tying the artery at the spot, when suddenly, at noon on the 7th of March, 1879, pulsation ceased in the swelling *and in the whole of the popliteal artery*, from both of which it has continued absent ever since. A collateral artery, probably a sural, then and subsequently, was a distinct, but the only, pulsating vessel to be felt in the vicinity. He afterwards entered a medical ward on account of abdominal and other pains, and was suspected to have aortic dilatation; but hitherto he has remained fairly well while doing nothing, and has not yet furnished a fresh diagnosis.

Here compression, both distal and local (flexion), and ligature by the Hunterian method, were alike followed by a reappearance of the disease, though they equally sufficed to bring about a consolidation and shrinking of the aneurism. The obliteration, however, of the arterial canal, as well as of the aneurism, is a further condition, the necessity of which is apparently proved by its absence in the first two pluggings (which failed through yielding to the blood-pressure, the pulsation of which was traced down the artery to the very aneurism), no less than by its obvious presence at the final, though spontaneous, plugging, which succeeded, pulsation ceasing not only in the aneurism, but *throughout the popliteal artery above it*.

Not only in this case, but in another described by my friend Mr. Puzey, is it clearly shown that obliteration of the artery at the seat is commonly essential to the cure of an aneurism upon it. But the achievement of this obliteration is equally shown to be dependent rather upon accidental circumstances than upon anything that the surgeon can certainly do or bring about by any of the methods employed at a distance from the aneurism.

In both cases a form of compression failed the first time; in Mr. Puzey's a form succeeded which had failed in mine; while the final cure in my case was so haphazard as to amount to one of the so-called spontaneous kind. It is not unlikely that the spontaneous cure was led to by the prolonged and repeated fingering which attends the observation of an obstinate case, through the detachment, impaction, and consequent extension of clot, laminated or not. The supposition is also encouraged that perseverance in one of the more rational forms of compression, even after one or more failures, may eventually prove successful, either directly, or indirectly through facilitating a spontaneous plugging before or after the abandonment of active compression.

It is perhaps fortunate that both compression and the ligature were shown capable of failure in the present instance, as, had either succeeded after failure of the other, some excuse might have existed for a repetition of the preference, often exclusively and dogmatically claimed, for one or other method. Thus while some surgeons prefer the ligature, others recommend compression, while others again are impartial. It is as certain that either method may succeed as it is that each may fail; but these two cases appear to illustrate pretty clearly the mechanism of permanent cure, and the *modus operandi* of the most popular forms of treatment.

The progress of the case, apart from the aneurism, may be stated as follows:—

Constitutional state.—The temperature never rose above normal, being taken morning and evening till the eighth day, when this was abandoned. The pulse during this week was never more than 80. The state of the bowels was irregular, but quite comfortable, during the first four weeks. The diet was for the first half week simply tea, beef-tea, and bread-and-butter; as the appetite increased, potatoes were added; and after a week or ten days meat diet was adopted; after which he ate the ordinary diet, but without milk or alcohol. This applies to the first four weeks.

State of the wound.—For two, or at most three, days after operation the finger was passed, morning and evening, greased, into the wound, round the edge of the exposed sartorius muscle, and under it to the site of the ligature, the edges of the wound being deeply pressed to ensure the proper escape of serum and sanies, this escape being facilitated in the intervals by the greasy state of the surfaces which were smeared with lard, and further by the additional covering of a layer of gutta-percha tissue, which prevented evaporation and the consequent formation of scab. During these first few days nothing but sero-sanious fluid, in small quantity, escaped, while bits of lymph formed and adhered here and there, but were wiped off twice daily with a damp sponge. The bloody ooze after operation was small, to a degree unapproached in any other mode of treating wounds, uncompressed; and the sero-sanious, and, subsequently, serous discharge which followed was equally insignificant. Besides which, the absence of tenderness was complete. After three days pink granulations covered the wound almost completely, and its deeper parts were allowed to adhere. Later a little pus became apparent in the trifling serous ooze from the surface, always without odour. At the end of a week a wet cotton rag was laid folded on the wound and kept damp by the patient. For a day or two before this the granulations had become uneven, prominent in parts, and of a boiled-sago-like character, a semi-transparent edge showing at their tips; but under the wet rag, after a single day, the granulations flattened down and became florid, showing that under the friction and warmth of the damp cloth only a thin layer of transparent colourless granulations covered the vessels supplying them, while previously the granulations had somewhat accumulated, and the red colour of the vessels was fainter in consequence. Another appearance was found on replacing the strip of gutta-percha tissue for a day upon the surface of bright-red granulation-tissue, and that was the appearance of a coating of yellowish lymph, a wet scab of puriform lymph readily wiped off, and again disappearing under the wet rag. All this time the superficial sore was contracting steadily though slowly, and healing was completed at the end of ten weeks.

It will be obvious to all who understand the Listerian method, and will I trust be clearly allowed by those who do not, that the present case is neither intended nor *pretended* by myself to establish the slightest detraction or dissent from that magnificent system. But it is none the less an attempt to explain the successful issue of cases partly or wholly deprived of antiseptic reagents, and equally devoid of a single ill effect on the infliction of a wound. No spray of any kind was used. My treatment here was deliberately undertaken in accordance with a premeditated plan, based upon sound surgical principles, though not in detail conforming with the practice of Professor Lister, but in reality less seriously divergent than a superficial criticism would suspect, from the canons laid down by that master, whose system of pathology has thrown more light upon the ground that it

covers than any other that can be named. The absence of pent-up discharge rendered its decomposition impossible, and removed an adventitious source of inflammation. There was, in fact, hardly a trace of unnecessary inflammation. The wound healed, as was its nature under the circumstances, without deep suppuration, and the scanty admixture of pus in the serum from the surface of the sore after deep adhesion was the trifling and only pathological waste experienced—that is, the healing by granulation was almost perfect, and beyond the trifling pus mentioned there was no more inflammation than is necessary for healing. Healing of wounds without inflammation is like a "footless stocking without a leg," and is only another definition of "nothing."

And now a word about the ligature, the site of which was drained as carefully and as perfectly as other parts of the wound. Thus the complete and antiseptic burial of the catgut in the granulations exuded around it was secured as a necessary prelude to its eventual solution during the cicatrisation of the arterial sheath. This drainage of the ligature is not only advisable in the case of carbolised material, whether soluble or not, but offers probably the only rational explanation of the way in which ligatures of silk, cotton, and hempen cord, without previous preparation or disinfection, are known to have become safely embedded in the cicatrix in a manner almost identical with that observed in the use of wire. A ligature, like a suture, is not itself irritating when the parts are quiescent, unless it lie in a pool of serum or pus, which is allowed to stagnate; in which case the tissues adjacent to the ligature become inflamed over and above the degree required for antiseptic granulation. The ligature cannot then be embedded, and its loop can only escape after disintegration of the arterial coat. Ligatures, or sutures, of spun material, are as unirritating as wire, *when they are drained;* and the special drainage of a ligature is secured in all perfectly drained wounds. Most of us have seen thread sutures, of silk, cotton, &c., when used, for instance, in the lip, prove perfectly unirritating in the absence of all special antiseptic reagents, union by the first intention having occurred in a perfectly antiseptic fashion which has been clearly explained to us by Professor Lister (LANCET, 5th June, 1875). On cutting out such sutures, the knot and outer part are lying on the skin and generally dried up, while the internal portion of the loop is wetted with the juice (serum and leucocytes, no doubt) in its track, but with no pus or any other evidence of extra inflammation. By Mr. Lister's method, properly done, the security of any ligature is fully ensured, and the most rapid and perfect possible progress of the wound brought about; but the above is probably the true explanation of, and the way to ensure, the safe use of thread or any kind of ligature, cut short and left in, in cases which have been, or may in future be, treated without his dressing. The subsequent possible harm which may attend the use of wire, or knotted thread, either imperfectly or not at all dissolved, is probably dependent entirely on their liability to be exposed to friction (a source of independent and fresh inflammation), and assigns a natural preference to the soluble ligature in all localities not protected against this obvious physical objection.

Liverpool.

"BARBARITIES OF CIVILISATION."

BY T. M. LOWNDS, M.D.

IN the June number of the *Contemporary Review* the "Barbarities of Civilisation," by Professor F. W. Newman, present some features which the author would have done well had he followed out further and presented some idea of the means by which a practicable remedy could be applied. This latter remark applies especially to what Professor Newman has recorded as to the pollution of rivers. His sole remedy for the pollution by human excreta is expressed as follows:—"One sentence suffices to express the cardinal condition which supersedes water carriage of refuse and ensures normal salubrity—viz., every block of houses should have side by side a proportional space of land suitable to periodical and rapid crops, on which the whole refuse should be expended." As well might the Mosaic rule have been quoted, for this is manifestly impossible now; it might have been practicable had the whole of England been converted into a town farm, allowing a quarter of an acre of land for each individual for the disposal of excreta and growth of food required for his sustenance. But we have to deal with established dwellings, with vast cities and towns where thousands and hundreds of thousands of inhabitants are congregated, and it is at once evident that the recommendation might have been as well omitted, if its practical bearing is estimated. What is required as a substitute for water-carriage of human excreta in towns, and filthy cesspools in country districts, is some plan which shall keep ordinary sewage entirely separate from excreta. Each may then be dealt with comparatively easily. The excreta must be kept so that no gases may be given off to the external air, must be preserved from further decay and change, and deodorisation must be so complete that no trace of foul gas may be detected by smell or chemical tests.

Let the possibility of this then be considered as far as the purification of our rivers is concerned, in reference to house sewage as it is at present. This consists of dirty water (the dirt chiefly vegetable organic matter) *plus* human excreta. We must first postulate that it is possible, nay easy, to keep the two separate (Moule's system), and we proceed to consider how they may be treated.

1. *Foul water drainage.*—No difficulties of any magnitude meet us here. A settling tank (the capacity of which is equal to about one day's consumption of water for all purposes), protected from communication with the outward air, outside the house, allows heavy particles to settle towards the bottom of the tank, and the light, such as fat, to float on the top; the overflow-pipe of this tank is a few inches below normal fulness, so that the fat remains as a protection against the absorption of air.[1] The overflow-pipe conducts the upper stratum of water, already deprived of the greater quantity of suspended matter by twenty-four hours' subsidence, to a second smaller tank, where from below the foul water passes through a rough gravel and charcoal filter, and it proceeds to the watercourse to the river at once. In its progress it is exposed freely to the atmosphere, so that it becomes partially aerated and deprived of what remains of impurity. This is a mere sketch, so many subsidiary arrangements are not alluded to, which would eventually prevent any escape of noxious gas, either to the house or external air. A simple arrangement would also allow of the removal of subsided matter and of fat without stopping the working for even an hour, except at rare intervals.

2. *The removal of excreta* is a more complicated affair, yet it is by no means impossible. And first a form of receptacle must be used which shall receive solid and fluid separately, and keep them separate. The solid must at once be covered with a small quantity of peat charcoal (one to two ounces per diem for each individual would be ample), and the fluid carried by a pipe to a tank outside the house, protected by a charcoal filter, there to remain until a sufficient quantity has accumulated, so that it may be removed by a force-pump to a water-cart, to be carried to a pumping-station, which shall at once pump it to a factory, where it shall be desiccated and mixed with the solids protected by charcoal. The preservation and removal of solid excreta, to which peat charcoal has been added, present no difficulty, as the charcoal at once decomposes every noxious gas given off. No doubt our disposal of sewage as at present is a barbarity, and I think Professor Newman has done well in broaching it in the pages of the *Contemporary*. The sketch I have given is, doubtless, possible, and the results to be anticipated are such as render the subject worthy of far more precise and practical treatment than is possible for me to attempt, but our late losses from typhoid, diphtheria, &c., should make all who desire to benefit their fellow-countrymen contribute even a mite to the destruction of the diseases which originate in faulty sewage. It is but a few days ago that an eminent architect remarked in my hearing that if we have water-carried excreta in the country we must have sewage infiltrated into our wells, and get our water-supply from a safe distance. Now let us glance at the results of such a plan if it could be carried out:—(1) Rivers and wells purified from sewage contamination; (2) our pure water is economised (a large amount of this saved from carrying excreta); (3) the area for the supply of pure water would be vastly increased; (4) a vast quantity of guano, equal to the very best Peruvian, is produced. The money value per

[1] The ingress of water to this first tank is near the bottom, so that the foul water gradually rises, and settles as it rises.

thousand inhabitants, whose excreta is so preserved, is about £333 annually.

Into the details of expenses I need not here enter, but I may state that an unlimited supply of peat charcoal (now used as a fructifier) is obtainable in London at from £2 10s. to £3 per ton; so that the cost of disinfecting the solid would be about 1s. per individual per annum. The fluid presents more difficulties in collection; but, at first, water-carts, properly charcoal-protected, should convey the fluid to a pumping-station, where a small engine would drive it miles through pipes to the factory without any loss or nuisance, and at very little cost. The whole might be underground. Its conversion into solid at the factory is merely a question of evaporation, and by suitable apparatus and proper admixture of chemicals, to render stable the volatile salts of ammonia, the whole of the water would be, without a trace of smell, dissipated.

Could some perfect plan for thus utilising excreta be devised, it is not too much to say that a very great improvement in the produce of our country would take place. It is not overstating the matter to say that four-fifths of the débris from our food, after it has produced brain, muscle, and heat, has been for the last twenty years buried in the earth and shunted into our rivers. Such is our loss from water-carriage. Is it too much to say that the value of this débris (excreta) expended in wages would make a perceptible difference to the workmen of the country? Four-fifths of the value, as compared with the best quality of Peruvian guano, amount to £8,000,000 sterling per annum, and would support some 100,000 families. All these hypotheses may perhaps appear Utopian, but the facts remain as proofs of barbarity, and anyone who chooses to go into figures will see that I have not overstated. Perhaps the Royal Commission on the Depressed State of the Agriculturist may enter on the subject, and find one strong cause at least why the ground gives poorer returns than it might do. Surely this is a legitimate deduction from Professor Newman's barbarity about water-carriage.

I notice with pain in many parts of this article the *animus* with which the Professor writes, far more the *animus* of a partisan than the calmness of a clear-headed impartial commentator. That no offence may be taken, I quote some of the passages which appear to me unworthy of the pen of the Professor. "It would seem that a conspiracy of silence was achieved in that early day." "Thus they confess that they dread perfect health (must we add that a healthy person pays them no fees?); they want to keep us in permanent cow-pox." What a pleasing insinuation against medical men! But one more, though the passages are not far to seek: "The laws were made and carried stealthily in thin Houses, and at midnight." It surely is not pleasant to read such a remark about our honoured Houses of Parliament. Stealthily! Professor Newman's remarks on vaccination, on vivisection, and on the Contagious Diseases Act, were all, I gather from those remarks, written with a very imperfect knowledge of the subjects and with only a one-sided partisanship. He condemns the statistics without pointing out how they are fallacious. Is Professor Newman aware that the same fact that Jenner observed about a century ago had also been observed in Persia? It was only the inductive faculty of Jenner's mind that has given him a world-wide posthumous fame. The writer would ask where Professor Newman got authority for his statement, "The Government vaccinators have for many years obtained a large part of what they call lymph (a fraudulent name—pus or matter is the only right word) by inoculating calves or bullocks with small-pox," and would ask him to define what his idea of lymph, pus, or matter was when he penned the above sentence? I may claim some personal experience of vaccination, having as an infant been reported to be vaccinated; again as a schoolboy, in 1840, when a fine arm resulted; again in 1855, when the vaccine took well; again in 1870, and once more in 1877. The last two occasions were experimental, and both took well; the only difference on the last occasion was, that the vesicle matured on the third instead of the eighth day, though even on the third day the feeling of malaise and feverishness was as well marked as if the disease had taken seven or eight days to run its course. For some years I had more than the usual opportunities of taking small-pox, living in the house with and visiting a variolous patient constantly, in charge for months of all the small-pox patients who came into the Jamsetjee Jeejeebhoy Hospital in Bombay in 1857 and 1858, and saw some patients there with variola for the second time, but none with a vaccine protection. One of the worst and most deadly cases the writer ever saw occurred in a more than usually robust Arab sailor, who was struck down and died in three days after admission. A few years ago a patient seen by me was attacked with small-pox a few days after her confinement; her infant was at once vaccinated, and small-pox and vaccinia ran a perfectly normal course in each case respectively. The infant had only vaccinia. For nine years I superintended the dispensaries and vaccination of Rajpootana, and during that time no cases of after ill effects, syphilitic or otherwise, were brought to my notice. The only thing complained of was, that during the hot season vaccination did not succeed well, as ulcers were apt to form, and then protection did not follow. It was discontinued during the hot months, and no more ulcers were reported.

In the cold season it was the invariable custom of the Rajpootana Agency, in marching from place to place, to give notice each morning by beat of drum (tom-tom) that the agency surgeon would see and give medicine to the poor at a certain hour in the afternoon, and also vaccinate all children who were brought. One afternoon, in a small town in the Ajmere district, over fifty children were brought, and on my inquiring the reason why so many came from so small a town, I was told that in the preceding cold season there had been a severe epidemic of small-pox, and that the people had observed that none of the children who had been vaccinated had taken small-pox. Nay, more; several of the parents were so impressed with the fact that their little ones had escaped, that they brought them again, and asked whether it was necessary that they should be done every year! This I thought, and still think, weighty and unprejudiced testimony.

The effects of small-pox without vaccination are, in addition to the mortality, which is very large, constantly seen in the number of men, women, and children who, having recovered from small-pox, get well sightless. If the question were put to any number of blind in Indian villages, my experience is, that the answer, in at least nine cases out of ten, would be small-pox. It has often been told to me at a midday halt in India, when out on shooting excursions, by the seniors and head men of the village, that the objection to vaccination was that Seetla, the goddess of small-pox, would be angry if they had their children vaccinated. The writer asked if Seetla was not angry when she sent small-pox, as a person is angry who gives a disease often fatal. They usually agreed that this was the case, and it was then suggested to them that the goddess was angry at their not being protected by vaccination. This mild reasoning was always acquiesced in, and produced a smile, and "Wagh, wagh!" (an exclamation of admiration and surprise.) Surely some such reasoning may not be out of place to more learned (but perhaps not wiser) heads than those of the poor Rajpoot cultivators. The *Evening Standard* of Aug. 14th says, on the authority of Dr. Larocque, that in Montreal "more deaths arise from small-pox than from all other diseases combined." This is at the time named.

I may just touch upon the next "barbarity"—the Contagious Diseases Act. Medical men who have advocated that Act have acted on the well-known axiom, "that prevention is better than cure," and certainly have shown more loyalty to their mission for the well-being of mankind than to their own self-interests in supporting such an Act. History, both sacred and profane, tells us that such conditions of society have always existed in the times of which it treats. It may well be doubted whether fear of disease will deter in any large number of cases. It has even been gravely argued with the writer that it was wrong in medicos to give aid or assistance to cure any such disease. This surely is a *reductio ad absurdum*; as the same argument might apply to the drunkard, or the gourmand, who each has brought his own ills upon himself by the improper indulgence of his appetites. It is strange that Professor Newman should write as he does, when he says the "common rights of the female sex were sacrificed," &c.; and in a few lines further on, "of maintaining state-slaves as harlots."

Let me recommend to Professor Newman a week's reading of the history of vaccination, small-pox, and inoculation; and while in the next month, he is digesting the bearing of facts of which he has read, he might daily observe the course of the disease at the Hampstead Small-pox Hospital with one vaccinated follower, and if he can reconcile it to his conscience (I could not to mine), and persuade an un-

vaccinated unprotected adult to accompany him, let him take such an one with him and observe. Also, a week's promiscuous reading on "contagious diseases," and a month's ocular observation at the Lock Hospital. He will at the end of this time, perhaps, be more disposed to view with charity the opinions of those who differ from him. I should, however, also recommend anterior revaccination.

Vivisection in the hands of licensed medical men is another rag of the red flag that Professor Newman treats as an offence of the most heinous barbarity. But his statements, as he puts the case, are scarcely to be understood literally, for he says: "The horrors of vivisection have found their earliest and most active advocates, not among actual practitioners of medicine, but among theorists, 'biologists,' and 'professors.'" For his next few lines I must seriously ask his authority, for, in the absence of proof, I entirely disbelieve that what he has stated has any foundation. The law surely can vindicate itself. Let him bring forward his facts, and punishment according to law will follow; let him not vivisect a whole class, and by concealment of the crime become himself *particeps criminis*. As to the lines quoted above about the earliest advocates not being actual practitioners being founded on fact, it may be mentioned that Sir Astley Cooper, Sir Benjamin Brodie, Professor Syme, Sir James Simpson, and Dr. Hope, *were pretty well known* as actual practitioners, and all these did not scruple to use animals for vivisection for the purpose of advancing the knowledge and practice of the "godlike profession." So many questions have been asked of the Professor, and so many of his positions questioned, that it is perhaps scarcely fair to put a final, yet a very broad, query to him, as to whether he approves of the castration of horses, of young bulls, of rams, and of boars, in order that they may be better fitted for our use? If I remember aright, one, whose words are quoted in the very page as condemning vivisection, as a medical student himself vivisected on this very subject of emasculation. I must not be misunderstood. I would shield God's creatures from all unnecessary pain, but should use them for the acquisition of knowledge for the saving of human life, just as those whose names I quoted did. Nay, more, I believe that there is no profession of which the members are, as a rule, so humane and so disinterested, as are medicos, and who go on in the acquisition of knowledge and the performance of duty in spite of the obloquy not unfrequently heaped on them, and they do not "strain at a gnat and swallow a camel," as those frequently do who decry vivisection with all safeguards, and take no objection to the castration of young animals in the rudest and most painful way.

Egham Hill.

ON ETHER AS AN ANÆSTHETIC.[1]

BY E. H. JACOB, M.A., M.B.,

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THE question of the best anæsthetic for surgical cases is one of the greatest importance, and one on which there is still considerable hesitation in the minds of many surgeons. I will now merely refer to the early history of surgical anæsthesia; the early use of ether—not unsatisfactory, though unskilfully given,—and its almost complete supersession by chloroform, owing to the genius and energy of Simpson. A few years ago the medical world seemed to have settled down to the fatalist opinion that one death or so per two thousand cases was unavoidable; and although the terrible words "Death from chloroform," appeared from time to time in the medical journals, but little attempt was made to find a substitute for this convenient but fatal agent. For the remarkable change of opinion on this point which has swept over England during the past six years we have to thank principally the editors of the medical journals, to whom we owe the greater publicity of fatal cases; and not less Mr. Clover and others, whose admirable instruments have made ether as easy to administer as chloroform, and as rapid in action as any known anæsthetic save nitrous oxide gas.

[1] Read before the West Riding Medico-Chirurgical Society.

During the past three years I have given ether to produce anæsthesia about twelve hundred times, and chloroform during the same period about a hundred times. In every case full notes were taken of the age and sex of the patient, the method of administration, the amount of the material used, the time required for inducing narcosis, together with the nature and the length of the operation, the occurrence of struggling or vomiting, and of any circumstance taking place during the period of narcosis which attracted attention.

There are three ways of giving ether—namely: (1) The American or smothering method, in which the patient is forcibly drenched with a large amount of ether from a sponge or towel. This mode is rapid and effective, but requires several assistants, and, from the patient's point of view, is about as pleasant as being drowned. (2) The open-air method with Golding Bird's or the American frame inhaler. This is pleasanter for the patient, but takes about ten to fifteen minutes, and struggling is frequent. (3) By the bag inhalers, such as those of Clover and Ormsby (the latter being a modification of Mr. Clover's instrument). By these narcosis can be quickly, quietly, and economically induced; the time being a minute and a half if nitrous oxide be previously given, a minute and a half to three minutes without the gas. The amount of ether used is about an ounce or less for every fifteen minutes; and even if Mr. Clover's small inhaler be used it seldom requires refilling for an ordinary operation.

Struggling occurred in my experience in about one in seventeen cases—quite as small a proportion, I think, as would be obtained with chloroform, considering the usual class of hospital patients operated on, many of them being cases of recent accident and partially under the influence of alcohol.

Epileptiform convulsions were noted as severe in six cases. These mostly resembled the phenomena of an epileptic fit—the glottis being closed, the face blue, the pupils dilated, and general convulsions being present, yielding, as does the regular epileptic spasm, in a few moments with a long breath. In one case the period passed without breathing was so prolonged that it was thought necessary to force open the mouth, draw the tongue forward, and begin artificial respiration; but I am not certain whether these precautions were really necessary. This form of spasm appears to be more common when gas is given than with ether alone, especially if some air be inadvertently admitted. A general quivering of muscles during narcosis occasionally gives some trouble, even though the ether be pushed to the verge of asphyxia, but it seldom lasts long. I have observed it also with chloroform. In one case, that of a boy of fifteen, on whom syndectomy had been performed by Mr. Teale, a remarkable hysterical state supervened during recovery from the ether. He had recovered enough to speak, but about fifteen minutes after the completion of the operation he became convulsed, the breathing rapid and shallow, pulse hardly perceptible, body rigid. He improved somewhat after artificial respiration, but for the next three-quarters of an hour had slight convulsive seizures, followed at last by sound sleep.

Obstruction to the respiration is the principal danger to be apprehended. This may arise (1) by collection of bronchial mucus and saliva in the larynx and pharynx, which may be removed by a sponge on a stick. (2) By spasm of the glottis, like that above referred to. In a few cases only can this cause any trouble. There are, however, cases on record where life appears to have been saved only by tracheotomy. (One reported by Mr. Clover, where a mixture of chloroform and ether was used; and one recently in Guy's Hospital, where, tracheotomy having been performed when chloroform had been used, a similar obstruction occurred when the patient was subsequently given ether.) In these cases the obstruction seems to occur sometimes by tonic spasm of the muscles of the glottis, sometimes from the flaccidity and paralysis of the larynx preventing air being drawn in by artificial respiration. (3) Obstruction may occur from the presence of vomited matters in the larynx. (4) Obstruction from the tongue falling back is common, and easily remedied.

Vomiting occurs with tolerable frequency. In my cases one in five vomited before leaving the theatre, and a few others afterwards, so that this number is under the mark. The vomiting, however, was very slight and transient—quite different from the prolonged vomiting we see with chloroform, and in no case gave any trouble. With reference to vomiting with chloroform, however, a friend who

has long and extensively used this agent tells me that in his experience about one in three vomits after that anæsthetic, so that here ether has slightly the advantage.

There has been much discussion as to the possibility of cardiac failure, so much dreaded with chloroform, occurring during ether narcosis. All who have much used chloroform must be familiar with the sudden paling of the face, the ashen lips, and arrested pulse, followed by moments of terrible anxiety on the part of the attendant, whether, in answer to his endeavours, the heart will again beat. Out of a hundred cases of chloroform administration, three have thus given serious anxiety, but fortunately the pulse has again started after artificial respiration, although in two cases a less alarming, but still severe, faintness long persisted. It was asserted that this never occurred with ether. Cases, however, of apparent cardiac failure have been reported by Dr. Morton, from Moorfields Ophthalmic Hospital,[2] and by Mr. Pye-Smith, of Sheffield.[3] In the first the breathing became very weak, and then stopped; the face grew pale, and finally the radial pulse stopped. In the second, the breathing almost ceased, and the face began to blanch, then the pulse failed, though the heart could be felt beating. To these I have to add a case which occurred about the same time. A patient who had had her breast removed was noticed to be very pale after the operation, but the pulse remained good, and she was breathing well. In about five minutes she ceased to breathe, and her lips were very white; the pulse, however, was still perceptible. She was restored by artificial respiration. These three cases have something in common, but it seems to me very questionable how far this arrest of respiration, though accompanied by facial pallor, is due primarily to cardiac failure. In experiments upon animals with ether, the heart is found to beat several minutes after the total arrest of breathing. May not these cases be due to the action of the drug on the respiratory centres, the failure of heart following it closely, but secondary to the respiratory failure? Whether this be the case or not, there is practically a great difference between gradual cardiac failure of this sort, and the sudden arrest of pulse and respiration observed in cases of chloroform-syncope.

In a certain number of cases faintness after the operation was observed after the stimulant effect of the ether had passed off, but this could always be accounted for by the nature of the operation.

The sequelæ attributed to etherisation are chorea, hysteria, mania, pneumonia, bronchitis. In three cases choreic movements followed the use of ether, persistent for varying periods, the longest being three weeks. The hysterical case has been mentioned above. I have never seen the transient mania or the stupor and symptoms of intoxication mentioned by some writers. In one case of a woman there was considerable sexual excitement on two occasions during etherisation. Three patients suffered from bronchial irritation for some time after the operation, one having been previously affected. In no case was the bronchitis severe.

In 1861 a committee of the Boston Medical Improvement Society reported on the alleged dangers of ether, and published a list of forty cases where death was said to have depended on its use. Examination, however, showed that in eight cases only did death occur during the operation, or could be said to be in any way caused by the ether, while the committee reported that "there is no recorded case of death attributed to ether which cannot be explained on some other ground equally plausible, or in which, if it were possible to repeat the experiment, insensibility could not have been produced and death avoided. Recently Mr. Dawson has collected the published accounts of death from ether,[4] and reports that in eight cases only could death be said to have resulted from the effects of ether. Since the publication of this paper two further deaths have occurred, in one pneumonia being the cause, in the other pulmonary apoplexy was found post mortem.

Considering that ether is at present used in every London and many provincial hospitals, this list of casualties is very small; still it shows that, though ether is the best known anæsthetic, we have still to seek for one absolutely perfect. For myself I can only echo Mr. Hutchinson's opinion expressed in a recent discussion on this point, and say I am grateful to ether for having on some twelve hundred occasions rendered the work of an anæsthetist light instead of anxious.

Leeds.

[2] THE LANCET, Oct. 14th, 1876. [3] Brit. Med. Jour., May, 1877.
[4] Brit. Med. Jour., vol. I., 1877.

THE ACTION AND USES OF HYOSCYAMINE.

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(Concluded from p. 503.)

IN chronic mania, with exacerbations, hyoscyamine is very useful, cutting short the exhibitions of temper and excitement of a violent and destructive character. It produces a state of physical impotence for the time being until the patients are able to exercise more self-control, and restrain themselves. These cases, as a rule, require only one dose, and that a larger one—viz., ¼ gr., ½ gr., or even 1 gr.—to effect any good; continuous doses have not with us effected any permanent benefit, while one or two doses will cut short effectually their violent condition. It is in these cases that hypodermic administration is most useful; as it frequently happens that it is not possible to get it into the patient except with the greatest amount of trouble, or by the nasal tube, while with the hypodermic syringe it is done quickly, and acts in a few minutes. The dose should not exceed $\frac{1}{15}$ gr. when given in this manner.

In that form of delusional insanity termed the mania of suspicion the results of the use of this drug have been very satisfactory. In these cases there is a condition of constant suspicion of everything which is around and apparent to any of the senses, varied by periods of exacerbation, and accompanied by hallucinations of all the senses.

For the notes of the following case I am indebted to Dr. Swanson, of York:—

B. D——, aged forty-nine, was admitted on the 22nd of January, 1878, and had been suffering for ten days with acute symptoms. He believed that everyone was conspiring against him, and were exerting an influence over him to send him to hell; that his servants were all leagued against him; that his brother had possession of him, and was slowly poisoning him; that his brother had forged his will; that he was watched by us in order to exercise some influence over him. He heard voices accusing him, had hallucinations of sight, and suspected some ulterior motive in everything that was done around him. On the 12th of March, up to which date he had not improved, he had ¼ gr. of hyoscyamine. In about an hour he became much excited, and said he had been poisoned. He could not stand; his pupils were considerably dilated. Three hours afterwards he was quite quiet and composed, had lost all his delusions, and conversed in a rational manner. $\frac{1}{15}$ gr. was then ordered to be given every three hours. On the 13th, after four doses, he was slightly incoherent, but made no reference to his delusions. On the 15th the treatment was still continued; still improving; traces of former delusions; complained of dryness of throat. On the 22nd he was somewhat depressed; slight traces only of his delusions still existing. On April 2nd the treatment was still continued. Delusions had entirely gone, and from this time he rapidly improved, and became convalescent.

In another case of delusional insanity, of the form of monomania, which had existed for two years, and probably longer, hyoscyamine produced no beneficial result. It was a case in which there was one dominant delusion of a grandiose character. All the acts and ideas of the patient were quite consistent with his view of himself, and in consequence of his detention he was in a condition of homicidal aggressiveness. He was treated with ¼ gr. and ½ gr. doses of hyoscyamine, given by the mouth three times a day, and afterwards hypodermically. For a month it produced a temporary condition of impotence and the physiological signs of its action. The case is interesting from the fact that he was fed with the œsophageal tube three times a day during the whole time he was taking the drug, showing that its administration does not interfere with artificial feeding, as has been supposed.

I believe that the altered cerebral condition produced by hyoscyamine was not sufficiently strong to overcome what was such a fixed and permanent delusion with him; or, if it did do so, it was only when he had been entirely overcome in the hypnotic stage of its action, and recurred immediately

on awakening, and is thus to be contrasted with the previous case, where the delusions were various, and caused by all kinds of external influences. Here hyoscyamine produces a cerebral excitement of its own, quickly leading the mind from its previous delusions to comparative composure.

The next case, for the notes of which I am also indebted to Dr. Swanson, is a case of chronic dementia, where the habits and general condition of the patient had been very bad for a very long time—several years. A continued course of treatment with hyoscyamine appeared to have no effect for some time, but ultimately produced a marked improvement in his condition. The patient was a male forty years of age. He was very destructive, destroying everything he could; was very wet and dirty in his habits, requiring to be changed many times a day; and he needed large doses of chloral at night to produce sleep. He began with the hyoscyamine on March 13th, and for five or six weeks it had no effect beyond giving him a good night's rest. He took $\frac{1}{4}$ gr. three times a day, and discontinued the chloral at the time of commencing it. After this time a remarkable improvement took place in him; it was very marked, slow, but permanent, and he ultimately entirely lost his previously troublesome and disagreeable habits, became clean and tidy, and rarely did any harm to his clothes.

In cases of senile dementia, in the paroxysms of excitement which occur, hyoscyamine exercises a marked benefit, subduing the excitement very quickly; but as the subjects of this disease are nearly always very infirm and feeble and their arteries almost always in a condition of atheroma and degeneration, it is only in some cases that it is admissible, and any drug tending to produce cerebral hyperæmia should be given with the greatest caution.

In the excitement occurring in the earlier stages of general paralysis it is stated by Dr. Lawson to be also of great service, but I have not had a favourable opportunity of testing it.

In melancholia it produces little effect, and cannot be said to be of any service.

In conclusion, as a summary of the results of the use of hyoscyamine in a considerable number of cases in this hospital, and from the cases reported by others, in regard to its advantages and disadvantages in the treatment of the various diseases of insanity, it appears—

1. That in most cases of mania, or where there exists great excitement of an aggressive and destructive character or rapidity of movement and speech, the use of the drug is the most effectual and rapid means of exercising that form of restraint which has been termed "chemical restraint."

2. That in cases of acute mania it will produce sleep and quietude when all other drugs have failed, and is one of the most rapid and reliable narcotics we possess.

3. That in the treatment of the epileptic status in epileptic mania it diminishes the number, frequency, and severity of the attacks, especially if its administration be extended over some time.

4. That in delusional insanity, especially the mania of suspicion and other forms of mania where the delusions are varying and changeable, it has a decided action in producing such an altered condition of the cerebral status that a condition which has been termed "physiological mania" results, and this so eclipses the former delusions and hallucinations that they are forgotten and the mind becomes clear; while, if the subjection to the influence of the drug be continued, it ultimately leads, under favourable circumstances, to a permanent condition of quiescence and restoration to a healthy state of mind.

5. That in chronic dementia, associated with destructive tendencies, bad habits, and sleeplessness, the condition of the patient much improves after a continued course of small doses of the drug.

The disadvantages that have occurred in its use, and which have to be guarded against, are:—The dryness of the tongue and pharynx that occurs, especially after a prolonged administration. This has been thought to contra-indicate its use in cases of artificial feeding, but provided the tube be dipped into an oily liquid before passing I have not found it any inconvenience. The attacks of vomiting that have occurred in some cases, after an administration of some weeks, necessarily lead to a discontinuance of the drug. Vomiting occasionally occurs after one dose, even a small one, and in two cases, mentioned by Dr. Lawson, hæmatemesis took place. Where rapid and sudden action of the drug is feared in feeble cases, it is better to administer it with the food.

NOTES OF THREE CASES OF OVARIOTOMY.

BY GEORGE ELDER, M.B.,
SURGEON TO THE HOSPITAL FOR WOMEN, NOTTINGHAM.

THE three cases of ovariotomy of which I present the records occurred in my practice at the Hospital for Women during the years 1877–78.

The first case occurred in the person of a Mrs. B——, aged thirty-nine years, and living at Hucknall Torkard. This patient was first seen by me during January, 1877, in consultation with the late Dr. Munks. She then complained of a large, ovoid, prominent abdominal tumour, which by its increasing size was telling upon her general health and activity. Her own impression at first was that she was pregnant, but the regularity of the menstrual flow, the flabby condition of her breasts, and, above all, the length of time—over twelve months—during which she had watched the progress of the growth, completely dispelled that idea. The skin over tumour was glistening and much distended, and the superficial veins on both sides were somewhat enlarged. By palpation the tumour was found to consist of a large, smoothly-surfaced, non-adherent single cyst, and ovarian in its origin. Fluctuation was very distinct, and pressure upon any part of the tumour elicited no pain. There was dulness over area of tumour, and resonance in flanks; movements of the body did not materially affect area of dulness. Examination per vaginam showed uterus to be normal as to size, although somewhat dragged up and anteverted. There could be felt bearing upon the vaginal vault a smooth-surfaced, distinctly elastic tumour, which conjoined manipulation proved to be continuous with that felt in abdomen. Excepting the ovarian tumour the patient was free from disease and in fair health. On ovariotomy being suggested to her, she gladly assented, and with this object in view was admitted into the Women's Hospital on Feb. 24th.

For the ten days prior to the operation, by the use of daily hot baths, lithia, and aperients, the functions of the skin, kidneys, and intestines were stimulated. Daily observation of the temperature showed it to be normal. On the morning of the 7th March, anæsthesia having been produced by a mixture of ether and chloroform, ovariotomy was performed. To avoid repetition, I may say that in this as in the following cases the abdominal incision was through the linea alba, beneath the umbilicus. The tumour was found to be monocystic, and connected with the right ovary. After the evacuation of the fluid contents, the tumour was withdrawn from the abdominal cavity without difficulty. The pedicle was rather long and narrow, and I secured it by transfixion with a stout, double silk ligature, and tied each half tightly. The tumour was then cut away, and when the peritoneal toilet was completed the pedicle was dropped in. Deep and superficial silk sutures were used to close the abdominal wound, which were supplemented by pieces of strapping, and covered with cotton wool. A flannel bandage completed the operation. For the five days succeeding the operation the patient had nothing by mouth except small quantities of iced milk and soda-water. The wound healed by first intention, and menstruation began on March 18th. On this day the temperature rose to 101° F., a degree higher than it had been previously. From this date the recovery of the patient was uninterruptedly good, and a little over a month after the operation the patient left the hospital perfectly well.

My second case occurred in the person of a Mrs. S——, aged forty-nine years, living in Nottingham. Although she had been twice married, she had never had a child at full term. I first saw her at my house in February, 1877, when she consulted me on account of an abdominal swelling. She was a spare, pale-faced woman, with the typical "ovarian expression." Her health had been failing for some time; but it was only five months before seeking advice that her attention had been directed by pain to the right groin, where she discovered a good-sized swelling. This grew so rapidly, and caused so much pain on movement and distress in breathing, as to prevent the performance of her ordinary house duties. On inspection of the abdomen I found it to be very considerably distended with a large, anteriorly convex, and prominent tumour. With the exception of flanks and a few inches below xiphoid cartilage and lower margin of ribs, the

whole abdominal cavity seemed to be encroached upon by the growth. The skin was freely movable over it, except at the umbilicus, and palpation caused no pain. Fluctuation was exceedingly distinct, and the limits of the tumour, which seemed to be composed of one large cyst, could easily be defined. All over the region of the tumour there was absolute dulness. On examination the uterus was found perfectly normal, and freely movable. Menstruation, I may remark, had ceased six months previously. The diagnosis I arrived at was that the patient was suffering from a monocystic ovarian tumour proceeding from the right side, and, as there were no contra-indications, ovariotomy was advised. The patient could not just then leave home, so, as a tentative measure, paracentesis abdominis was performed, to her great relief, ten pints of thin, limpid, ovarian fluid being withdrawn. In the interval between the tapping and admission into hospital on the 19th June her general health had somewhat improved, although the tumour had attained even a larger size than formerly.

After the usual preliminary treatment, ovariotomy was performed on July 7th. There was nothing worthy of note in the operation, which only occupied a short time. The pedicle was rather thick and short, and I treated it as in the former case. The fluid contents of cyst, which was right ovarian in its origin, measured fifteen pints, and the weight of cyst and attached solid matter amounted to only one pound and a half.

For the four days following operation, patient's condition was everything that could be desired. Suddenly, on the evening of the 11th July, the temperature rose to 102° F. This ominous change was preceded by "shivering" and acute pain in right groin. Despite the use of hypodermic injections of morphia, hot applications, and stimulating enemata, combined with large doses of quinine, the patient passed a very restless night, and when I saw her in the early morning her condition was decidedly worse. She lay in a state of almost perfect collapse. Her features were pinched. She was frequently sick. Complained of severe pain in epigastrium, and lay moaning. There was now distinct tenderness in right iliac region, but no distension. Vaginal examination threw no light on the case. On the morning of the sixth day she died.

Twenty-eight hours after death Dr. Morris and I made an examination of the body. We confined our inspection to the abdominal and pelvic cavities. The peritoneum was deeply injected, and covered in places with loosely adherent flakes of lymph. The pelvic cavity was filled with liquid blood, which had evidently proceeded from a vessel of the pedicle into which the ligature had ulcerated.

I have no doubt the rise in temperature was synchronous with the hæmorrhage, and that the acute peritonitis followed as an effect.

My last case was that of a Mrs. B——, aged thirty-two years, living at Cymmer, South Wales, who was admitted into hospital on the 1st of July, 1878. She had been married four years, but had never had any children. The tumour was first perceived a year previously on left side. There was then occasional pain in umbilical region, vaginal fulness, feeling of bearing down of uterus, and dysuria. These symptoms were aggravated at menstrual periods, which were regular. Medicinal treatment failed to prevent the rapid growth of tumour. As it increased in an upward direction, dyspeptic symptoms supervened and dyspnœa. The pressure of tumour on admission had also considerably diminished renal secretion, and produced œdema of lower extremities and genitals. There was also decided emaciation. As patient lay in bed the abdomen was seen distended by an irregularly rounded tumour, quite as large as a woman at full term. The surface of tumour was uneven. Two distinct cysts could be made out, and above umbilicus and to its right a large solid mass was felt. The greatest girth of body (forty-two inches) was at this part. There was very little mobility of tumour. Dulness was decided over it, whereas in flanks percussion note was clear. Uterine examination showed it to be fairly mobile, normal in size, and dragged up and flattened as it were against symphysis. Ten days after admission paracentesis was performed, and seventeen pints of thick, dark, syrupy-looking fluid taken away. On account of the large amount of solid matter, the patient's size was not so visibly reduced as might have been expected.

On August 11th, about a week after a menstrual period, I performed ovariotomy under the carbolic acid spray, and with antiseptic precautions. Bichloride of methylene was the anæsthetic used. In incising the skin and subjacent tissues there was considerable delay on account of the very free venous oozing, which I controlled by pressure and ligation. On opening peritoneal cavity there were found to be considerable parietal adhesions both in front and at right upper part of tumour, which with some difficulty were broken down by hand. By means of two trocars both cysts were emptied of their contents, and then an attempt was made to withdraw the tumour. This could only be done by prolonging the originally rather long abdominal wound. As it was being drawn out it was found that there were omental adhesions. These I secured by means of catgut and cut off. The pedicle was secured by a clamp, above which needles were passed through its tissue so as to avoid the possibility of retraction, and then the tumour was cut off. Its solid portion weighed over twenty pounds. Instead of covering edges of wound, after they had been brought together with cotton-wool as in the former cases, thymol gauze was used. The wound healed by first intention, and the clamp dropped off on the twentieth day, leaving a small granulating sore. On the 10th Sept. menstruation began, with also a slight "show" from abdominal wound, and two days afterwards patient walked out of hospital well.

I may say that both this and the first case remain in perfect health.

Remarks.—In all the cases I found Thornton's ice-cap useful, not only in controlling the temperature, but also in comforting the patient. Should I have the misfortune to see a case similar to the second, I should, without hesitation, reopen under the spray the abdominal wound, and secure anew the pedicle. In these cases it seems to me one of the most important factors in the result is the nursing, and I cannot close this brief note without bearing testimony to the self-denying devotion with which our matron, Miss Martin, tended the patients.

Nottingham.

HYPOSULPHITE OF SODA AS A SPECIFIC IN ZYMOTIC DISEASE.

BY BINGHAM CROWTHER, L.R.C.P.LOND.,
HOUSE-SURGEON TO THE GENERAL HOSPITAL, HOBART TOWN.

THERE can be no doubt that we have in hyposulphite of soda one of the most valuable remedies for a large class of fungoid diseases (tineæ, &c.), also many varieties of zymotic affections. It is also a potent remedy in certain intractable acute and chronic ulcers, whose origin and continuance seem due to some local irritant of a fungoid or bacteriod nature. From the vast number and varied class of diseases over which it exercises a controlling influence it is destined to hold the first position as a specific in our pharmacopœia. I will only take for the present three forms of zymotic disease proving its great use (having tried it in many similar cases), and on some future occasion will point out the different forms of ulcers rapidly cured by this agent after resisting every other treatment.

CASE 1. *Abortion; Hæmorrhage, followed by Septicæmia; Cure.*—M. A. S——, aged thirty years, admitted August 31st, 1877. Is married, has three children. No previous abortion. On July 25th was kicked in abdomen, being four months pregnant. Severe pains in abdomen. On 26th and 30th, in addition to pain, noticed a "show." On the evening of same day great hæmorrhage occurred, which continued severe until admission, causing her to faint several times. On admission is weak and anæmic. Profuse uterine hæmorrhage. Vagina full of clots (1½ lb. removed with finger). Os patulous, tough shreds hanging from latter. No further hæmorrhage after plugging with pledgets of cotton wool.

Sept. 1st.—Plugs removed; much profuse dark and fetid discharge with ovum followed. Vagina injected thrice daily with lotion (carbolic acid, two grains; hyposulphite of soda, four drachms; glycerine, half an ounce; water, a pint.) A pad of marine lint, soaked in the lotion, placed over vaginal mouth.

She continued to improve until the 2nd, when she was seized with a violent rigor at 4 A.M. Pulse 130, small. High temperature. Great oppression about heart, which

palpitated violently. Headache. Uterine discharge very fetid. More shreds removed. Is in a very precarious condition—thinks she is dying. Up to this time she had taken a mixture containing liquor strychniæ, five minims; liquid extract of ergot, twenty minims; hyposulphite of soda, six grains; quinine, two grains; syrup of oranges, one drachm; camphor water, one ounce, each half hour, with four ounces of brandy, three eggs, and strong slops. From the setting in of septicæmia the quinine was omitted from mixture, otherwise continued as before.

3rd.—No more rigors. Pulse 120. Less headache. Expresses herself better. Discharge less; not so fetid.

6th.—Has continued to improve daily since the 3rd. Feels comfortable and wishes to get up. Bowels acted daily since the 3rd. (Injections of turpentine on the 2nd, also on 3rd.) During all this time the womb had been washed out with the lotion thrice daily, and the mixture, since the 5th, gradually taken at longer intervals, until thrice daily.

On the 9th solid food was given, and until she left the institution on September 17th cured.

CASE 2. *Scarlet Fever, followed by Diphtheria; Cure.*—J. T——, aged seventeen, admitted July 28th, 1877. States that he has been unwell for a few days, and that four of his brothers and sisters have died of a similar fever to the one he now has, two of them dying within forty-eight hours from the time when first seized with the malady. Is covered universally with a scarlet purplish rash (papular) of a darker hue than ordinarily seen. Is very delirious. Pulse 120; temperature 104°. Seems in great danger; typical scarlet-fever tongue; throat and tonsils swollen (more so the latter), also painful; has much difficulty in swallowing.

This condition continued very severe until the 30th, when the rash was fading; and by August 5th he had convalesced, being up daily, and progressing favourably until the 15th, when complaint was made of sore-throat, and difficulty in swallowing, also of great bodily depression and anorexia, with a small weak, rapid pulse, 120. The tonsils were swollen, and some whitish firm patches, size of split peas, and difficult to remove, were found on an inflamed base here. By the 20th this exudation had extended from the tonsils to uvula and back of pharynx, all constitutional and local symptoms becoming more urgent. On the 31st he began slowly to improve until September 5th, when an erythematous flush alone was seen at back of pharynx. Discharged cured on the 7th.

The treatment was a saline mixture, with nitric ether and hyposulphite of soda, eight grains, each eight hours, with strong slops, wine and eggs, until August 5th. On the 15th, when diphtheria set in, the throat was constantly gargled with a lotion of chlorate of potash, dilute hydrochloric acid, glycerine, and tannic acid, with the inhalation of sulphurous acid from Siegel's spray; also extra wine and eggs given, followed by tonic mixture of iron, nux vomica, and quassia, as he was convalescing.

CASE 3. *Compound comminuted Fracture into Left Elbow-joint; Erysipelas; Cure.*—E. C——, aged fifteen, admitted February 18th, 1879, under the care of Dr. E. L. Crowther, honorary surgeon. Patient stated that whilst driving a cart he came in collision with another, was thrown out, and the wheel passed over his left arm at elbow. On admission, a lacerated wound was found two inches long, to inner side of left elbow, exposing articular surface of joint (the ulnar nerve in a contused condition), and leading down to several easily removed fragments of bone, amongst them the inner condyle. The wound was enlarged whilst under chloroform; olecranon process and head of radius removed, articular end of humerus also, and arm placed in a rectangular splint. No sensation in parts supplied by ulnar nerve before operation, but radial and ulnar arteries pulsated.

By the 28th February the patient was up and about, the wound having nearly healed. During this interval three small portions of bone came away. By April 19th the splints were removed, and gentle flexion was adopted, and continued daily stronger until May 16th. On the 17th he was taken with severe pain in the head, with constant nausea; obliged to take to bed all day; pulse 100; high temperature, with pain and swelling about the affected joint. On the 18th he was a little better; the left (affected) arm was found universally swollen as high as the shoulder, hot, and very red (the redness rapidly returning on removal of pressure); tongue covered with thick white fur; no appetite. By the 21st he had gradually improved; all swelling, heat, and redness had entirely disappeared, with the exception of a slight amount in the hand, which had subsided the next day. Discharged, able to move his arm freely in every direction. Perfect sensation in region of disturbance.

The only important treatment of the ulnar nerve adopted was on April 18th, when a mixture of castor oil, collodion, and glycerine (equal parts) was painted on the arm twice daily. In addition, a mixture of quinine, nitric ether, and hyposulphite of soda was given each eight hours. His diet throughout was slops until April 5th; after that were added chops; and on the 16th the ordinary full diet was adopted, which was again changed to slops on the setting in of erysipelas.

It will be seen, in all these serious affections, that the symptoms, both local and constitutional, receded with unusual rapidity; many other cases also which I well remember convalesced even more rapidly than those above mentioned. The hyposulphite of soda appears at once to enter the blood, rapidly influencing for good the zymotic change.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. IV. Proœmium.

LONDON HOSPITAL.

CASE OF TRAUMATIC TETANUS, TREATED BY HYPODERMIC INJECTION OF ATROPINE; RECOVERY.

(Under the care of Mr. JAMES ADAMS.)

THE patient was a blacksmith, aged forty-four, who received a lacerated wound of the right eyebrow on Dec. 26th, for which he was made an out-patient. This wound healed in a few days, but there was a little suppuration round it. About ten days after the accident the muscles of the lower jaw became rigid; he could take food only with difficulty, and he perspired a good deal. On Jan. 7th he attended in the out-patient department, when it was found that he had complete paralysis of the right portio dura, and he complained of great pain over the right temporo-maxillary articulation. He could open his mouth to the extent of half an inch, and he did not complain of any other pain or spasm to suggest tetanus. From the pain localised at the joint, and the perfect paralysis of the portio dura, it was thought that he had some rheumatic affection of the joint which prevented his opening the mouth. This, with the facial paralysis, might have been produced by cold. A few days later, however, this symptom became more marked, and he was taken into the hospital.

The tetanic spasms affected the muscles of the abdomen and back and the flexors of the legs; the chin was drawn down to his sternum, the teeth could not be separated more than a sixth of an inch, and the facial muscles of the left side frequently twitched. No contractions ever occurred on the side of the facial paralysis. The spasms of the spinal muscles were the most intense, so that he had opisthotonos, which lasted with varying degrees of intensity throughout.

Immediately on admission (the 7th) the treatment was commenced by injecting one-sixtieth of a grain of atropia under the skin every four hours. By the 19th the jaws could be opened sufficiently to allow him to take fluids freely from a feeder (he having been previously fed by a tube), but otherwise the spasms were no better. On the evening of the 20th he was delirious; pupils not dilated. He was very violent in the night. Next morning he constantly moved his arms, and seemed to think he was working at his trade. In the night there had been marked opisthotonos, and the house-surgeon gave the usual injection of a sixtieth of a grain of atropia, repeating it in two hours; after which he was much quieter. In the periods of remission his abdominal muscles became more relaxed, but towards evening the symptoms increased in severity; about 6 P.M. and at 10 P.M. the spasms were very severe; temperature 104°. The injections were given at 6, 8, and 11 P.M.

On the morning of the 22nd he was much quieter.

Temperature 100°. The muscles were still rigid. At 4 P.M. one-fifteenth of a grain of atropine was injected. At 11 P.M. temperature had risen to 103° F. There was marked increase in the frequency and severity of the spasms. Again a fifteenth of a grain was injected, after which he was quite quiet for an hour. Later on he became restless, the spasms increasing, and attended with marked opisthotonos. The pupils were not dilated. A fifteenth of a grain was again injected, being three hours after the last. Temperature 105°. Next morning the patient was still restless, and had low muttering delirium and picking at the bedclothes. The pupils were dilated. Temperature 103°; pulse 120; respiration 36. He answered incoherently. The muscles were still rigid, but with much fewer and slighter exacerbations. Altogether one-third of a grain had been injected within the previous twenty-four hours. Atropine was discontinued.

From this time no more atropine was used. The delirium passed away in a few days. At first the tetanic spasms appeared to increase in severity, but it soon became apparent that the patient was slowly improving. The abdominal muscles, as usual, were the last to relax, but at the end of three weeks the man was practically well.

Remarks by Mr. ADAMS.—It is very difficult to say how much the atropine had to do with the recovery. Although not one of the most acute cases, it was undoubtedly one of considerable severity, and at the outset an unfavourable prognosis was given; still it is quite possible that recovery might have occurred, as in cases of chronic tetanus, independent of treatment. On the other hand, the patient, when not delirious, always expressed himself as being relieved by the injections, and those in immediate attendance on him reported him as being generally quieted by them for a short time.

The atropine treatment, hitherto but rarely used, seems at least worthy of more extended trial, and Mr. Adams suggests that it should be pushed until symptoms of poisoning are produced.

LIVERPOOL WORKHOUSE HOSPITAL.

FOUR CASES OF AMPUTATION THROUGH THE HIP-JOINT; REMARKS.

(Under the care of Mr. WILLIAM ALEXANDER.)

CASE 1.—James F——, aged seven years, was admitted May 28th, 1875, suffering from disease of the left thigh-bone, a part of which was lying bare amongst the glutei muscles. The disease had induced pyæmia, and the little patient lived in constant horror at the idea of being moved. Two years previously the patient had a fall, which excited coxalgia in the left hip. Excision was subsequently performed by a surgeon, but the wound not healing, he was sent into the workhouse hospital. Further examination revealed necrosis of the upper end of the femur for three inches, as well as necrosis of the acetabulum, and enlarged liver and spleen. For two months and a half rest, good feeding, &c., were tried, only with the result that the patient was slowly but surely sinking. Accordingly, on August 25th, 1875, amputation was performed by anterior and posterior flaps. Scarcely an ounce of blood was lost, and the collapse was successfully combated by champagne. Next day all danger was over, the wound discharging profusely. The acetabular sequestrum separated in about six weeks, and at the end of six months the patient was sent to school strong and well.

CASE 2.—John W——, aged twenty-one, a carter, apparently in good condition, but an inveterate drunkard, was admitted some time in 1874, under the care of Mr. Alexander's predecessor, Mr. Barnes, suffering from coxalgia of right hip. Mr. Barnes excised it February 11th, 1875, with a good result for a time. The patient was readmitted towards the end of 1875, when Mr. Alexander re-excised it (April 5th, 1876) with a similar result to that on the previous occasion. As further excision did not offer any relief, amputation was performed January 20th, 1877. The shock was not severe, no blood was lost, and no champagne was required. The patient experienced much relief. Some acetabular sequestra came away, but the wound never healed completely. The man took his own discharge, although he had no friends to go to, and the result was that in a short time he came back dying from pneumonia, and in a most emaciated condition. His left ilium was a mere shadow of the opposite one, being affected with caries over its entire outer surface. He died eighteen months after the amputation.

CASE 3.—J. McC——, aged eight, was admitted on Oct. 11th, 1877, suffering from disease of the left hip-joint, the result of a fall. Excision was performed on May 8th, 1878, when both the acetabulum and the head of the femur were found extensively diseased. The patient rallied quickly after the operation, and the wound closed by the end of May. He was then attacked by lienteric diarrhœa, which went on for nearly two months, and was only checked by the administration of large doses of the liquid extract of bael. In October the wound reopened, a profuse discharge appeared, and exploration revealed extensive disease of the femur and acetabulum, much more extensive than the patient had any chance of resisting. Amputation was proposed, but rejected by the parents, on the plea that as the boy was nearly blind from a neglected ophthalmia, it was better for him to die than live with one leg. With their consent the operation was, however, performed on Oct. 23rd, 1878. The shock was severe, but gave way to champagne. The temperature, which, like the first case, had been ranging between 103° and 99°, came down to normal on the 26th. Patient ultimately got fairly strong and healthy.

CASE 4.—Michael C——, aged eleven, was admitted January 31st, 1879, suffering from pain, tension, and swelling of left hip-joint. Temperature 103°; pulse 113; respiration 32. Disease caused by a fall on the ice a fortnight before. On February 10th fluctuation was felt at outer side of thigh. An abscess was opened, and half a pint of sanious pus was evacuated; much relief was experienced thereby. On February 14th another abscess was opened on the inner side of the thigh. For the next three weeks pyæmic symptoms, accompanied by signs of pneumonia in the left lung, prevailed; the temperature kept up to 103° or 104°, and numerous fistulæ formed around the upper third of the femur. By the end of February the pneumonia had disappeared, the pyæmia had become chronic, and the appetite had improved, but the patient's strength was failing, owing to the great amount of suppuration. It was now proposed to amputate, but leave only was given to excise. Accordingly, on March 26th, 1879, excision was performed, but so much of the femur was diseased, the patient was so weak, and the tissues of the upper third of the thigh so infiltrated, that amputation was performed at the same time as the only chance of saving life. An hour after operation the temperature in the axilla was only 95°. By the frequent administration of small doses of champagne, in six hours it was 99°. A subcutaneous injection of three minims of morphia and atropine solution was then given. The patient slept soundly all night, and next morning the boy's face wore a very peaceful expression—a marked contrast to what it had been for weeks before. On the 29th his temperature was normal, and by the beginning of June was quite recovered, the stump being perfectly sound.

In all these cases amputation was performed by antero-posterior flaps, made by transfixing the limb.

Remarks.—Amputations through any part of the femur are still looked upon as capital operations, and amputations through the highest parts and through the hip-joint are worthy of being recorded not only on account of the dangers and difficulties of the operations themselves, but on account of the risk from shock that follows them. Quite recently, and on the assumption that much of the danger in operation arises from hæmorrhage during its progress, a plan has been adopted and an apparatus described and tried for pressing upon the iliac artery inside the pelvis. In some cases, by this method no blood has been lost, in others the plan has failed, and some say that inflammation may be the result of its use. In the above cases digital pressure in the usual way upon the artery as it passed over the brim of the pelvis, followed by pressure by the finger on any artery that spouted, until the operation was completed, was the method employed, and so effectually was it done that no serious amount of blood was lost in any case, and in most the loss only amounted to a few drops. The chief risk to life arises from the subsequent shock. That can, I believe, be most successfully treated by the judicious and frequent use of champagne. Having tried all the diffusible stimulants in such cases as the foregoing, champagne proved the most effectual. When reaction has set in, a morphia and atropine subcutaneous injection enables the patient to get over the distressful hours succeeding in a way the least hurtful and exhausting to his strength. These cases are the only ones of the kind that I have performed, and the fact that they

were all successful may have led me to attach more than a just value to the plan of treatment followed. At any rate I offer them as a contribution to the statistics of the operation.

THREE COUNTIES ASYLUM.

A CASE OF HYDATID CYST IN THE WALL OF THE LEFT VENTRICLE OF THE HEART; RUPTURE OF THE CYST; SUDDEN DEATH.

FOR the notes of this rare and interesting case we are indebted to Mr. J. Stirling Buck, M.R.C.S., junior assistant medical officer.

A. S——, male, aged eighteen years, a farm labourer, was admitted into the asylum on May 3rd, 1879, suffering from an attack of "mania" of seven days' duration, the probable cause of it being "hereditary," for his father and mother both died in an asylum. One brother died of heart disease.

On admission he was pale, delicate-looking, of fair complexion, having a wild excited expression. The mucous membranes were anæmic. No physical examination of the thorax was made. He seemed in fair health, and complained of no pain; he was usually tolerably well, excepting for slight occasional attacks of dyspepsia; there was no œdema or anasarca.

On May 4th he seemed well and progressing favourably, though excited, with some maniacal delusions. At 6.45 A.M. next day, when being dressed by an attendant, he suddenly fell down foaming at the mouth, and became intensely cyanotic about the face and extremities. Mr. Buck was at once sent for, and saw him five minutes after, when he was quite dead.

Necropsy, six hours after death.—Weather warm, bright, and dry. The tongue was between the teeth, but not bitten. The mouth was full of clear frothy fluid. The thumbs were not clenched into the palms of his hands. There was slight prominence of the right hypochondriac and lumbar regions of the abdomen, which were absolutely dull on percussion.—There was no emaciation, and no other external marks. Head: The skull was rather thinner than usual; longitudinal sinus rather gorged with blood. The convolutions of the brain were well marked and of firm consistence; the vessels of the pia mater were gorged with blood, and three was slight excess of fluid in the ventricles; no signs of hæmorrhage could be discovered anywhere; weight of whole brain, 50¾ oz.; weight of cerebellum, 6½ oz. The lungs were quite healthy. The heart weighed 10½ oz.; the mitral valves were healthy, but somewhat thickened; the tricuspid and semilunar were also healthy and rather thickened. In the wall of the left ventricle, near its apex, there was a cyst about the size of a pigeon's egg, which apparently had burst into the cavity of the ventricle, by a small aperture at the upper part of the cyst; to the hinder wall of the cyst, just below the point of rupture, there was a large chorda tendinea attached. On removing the cyst from the wall of the ventricle there was a large round cavity left with perfectly smooth walls. The muscular tissue of the wall of the ventricle was very much thinned, both behind and in front of the cyst, so much so in front that for the space of about a half-crown it was entirely replaced by a rather thick and tough fibrous membrane. On examining a little of the scraping from the inner wall of the cyst under the microscope, echinococci were found. Three large cysts were also found in the liver, the largest in the left lobe, another in the lobus quadratus, and another smaller one in the anterior portion of the right lobe; the liver substance was normal. Microscopical examination of the contents of the cysts revealed plenty of echinococci. The other organs were perfectly healthy. There was no obstruction in the larynx or trachea.

ADELAIDE HOSPITAL, SOUTH AUSTRALIA.

REMOVAL OF HALF OF A NO. 7 GUM-ELASTIC CATHETER FROM THE MALE BLADDER BY LITHOTOMY.

(Under the care of Dr. CHARLES GOSSE.)

W. H——, aged eighteen, was admitted into hospital on Nov. 16th, 1878, with the following history. He had for some time past suffered with difficulty in passing his water, not from stricture, but from atony of the bladder, and had been in the habit of using an instrument for himself. On the day before his admission he passed his gum-elastic catheter as usual, but in withdrawing it found that only half appeared; the remainder, he stated, had broken off in the bladder.

On admission a sound was passed into the bladder, but with uncertain results as regards the presence of a foreign body. Two days afterwards the sound was passed again, and all uncertainty removed. The patient's state indicating some considerable amount of pyrexia, on Nov. 20th, ether having been administered, he was examined by Dr. Gosse and his colleagues. After a good deal of discussion, it was decided to operate as if for stone, and try to remove the half catheter.

The patient being placed in the lithotomy position, a Buchanan's staff (modified with the joint at an obtuse angle) was passed, and went in very easily, the patient having a spacious urethra. With one cut the groove in the staff was struck, and, the incision being continued, the bladder was entered with very great ease. The finger was then introduced into the bladder, and the first thing it came in contact with was the catheter, bent into the form of an oval; it was removed without using the forceps.

The lad made a somewhat protracted recovery, not leaving the hospital for six weeks, but the wound had perfectly healed by that time.

It should be added that the lithotrite was tried on two occasions, but, from the very nature of the substance in the bladder, there was some doubt whether the body had been touched or not. In this particular the case differs from one recorded in THE LANCET of Jan. 18th, 1879, of the removal of a clay pipe-stem by Mr. Rose, of King's College Hospital. In the present case it was deemed useless to persevere with the lithotrite, and recourse was had to the knife almost at once.

OBSTETRICAL SOCIETY OF LONDON.

ON Wednesday, Oct. 1st, the Obstetrical Society held its first meeting after the recess. The attendance was but scanty, owing to the fact that many of the schools had their opening meetings or dinners at the same hour. The following papers were read: Cholera in the New-born, by Dr. Lucas; Deficient Development of the Uterus, Atresia of the Os Externum, Atrophy of the Ovaries, by Mr. Alban Doran; Notes on an Acoustic Sign heard after the Death of the Fœtus, by Dr. Harvey; a Case of Congenital Inguino-ovarian Hernia, in which both Ovaries were removed, by Dr. T. Chambers.

This last case was that of a young woman twenty-four years of age. She had observed the swellings in the inguinal region as long as she could remember. She had never menstruated or experienced menstrual molimen. There was a small, short, conical vagina, at the top of which was the opening of the urethra. No uterus could be found by vaginal or rectal examination. The bodies in the groins were subject to pain and injury from knocks and blows, and it was determined to remove them, for they could not be pushed up into the cavity of the belly. When the patient was put under chloroform, however, one of these bodies ascended through the inguinal ring spontaneously. They were removed under carbolic spray, but the dressing of the wounds appears to have been imperfectly antiseptic; the wounds suppurated, but the patient completely recovered. The specimens removed were shown at a previous meeting of the Society, and were referred for report to a select committee consisting of Dr. Galabin and Dr. John Williams. Their report was read after the paper. Microscopic examination showed the bodies to be glandular organs, presenting, however, the structure, not of ovaries, but of imperfectly developed testicles. Sections were exhibited showing the small tubules of the testicle. The external characters of the organs, moreover, were those of the testicle.—In the discussion which followed, Dr. John Williams said he thought this case was one of the most valuable of the kind published, on account of the completeness of the history and of the anatomical examination of the specimens removed. It was difficult to understand how an ovary could enter a congenital hernia, while it was well known that the testicles naturally descended along the inguinal canal, and it was far more probable that all cases of supposed congenital hernia of the ovaries were really cases of undescended testicles.—Dr. Routh thought that the absence of the uterus could only be

decided with certainty by the introduction of the hand into the rectum.—Dr. Galabin described the specimens exhibited, and thought that similar bodies found in the groin from birth were more likely to be testicles than ovaries.

Reviews and Notices of Books.

San Remo and the Western Riviera Climatically and Medically Considered. By ARTHUR HILL HASSALL, M.D., M.R.C.P. Lond., Founder of, and Consulting Physician to, the Royal National Hospital for Consumption and Diseases of the Chest, &c. Small 8vo, pp. 279. Longmans and Co. 1879.

IN a handsome volume of seven chapters Dr. Hassall has produced a work on San Remo which will take its place as a companion treatise to Dr. Bennet's well-known book on Mentone. The marvellous beauties of the Western Riviera have inspired the pens of many writers. The Western Riviera, or Riviera di Ponente, is a district extending along the Mediterranean shores from Nice to Genoa, a distance of 116 miles, and abounding in small towns with picturesque scenery and mild climates, places well adapted for winter stations for the invalid. Of these Mentone has perhaps been the most fashionable, or at any rate the most extolled. It, however, promises to find a powerful rival in San Remo, sixteen miles further east. San Remo partakes of the leading characteristics of all the sanitaria along the Western Riviera; that is to say, it has a bright and sunny climate, warm, dry, and bracing, yet fairly equable. Along with other authors from whose writings he freely quotes, Dr. Hassall claims for San Remo certain advantages over its neighbours; for instance, it is held to be drier and less depressing than Mentone, to have a less exciting air than Cannes, and to be without those clefts in the rock ("torrent-beds") which, as at Nice, transmit the cutting blasts of the prevailing north wind. The meteorology of San Remo is discussed with some care, and its temperature and rainfall are contrasted favourably both with other stations on the Riviera and with English health-resorts, especially with Ventnor, which the author considers to be the most favoured climate that the British isles afford. Medical men will naturally search for instruction about the cases for which the climate is suited, and will regret to find opinions cited from other writers where they would rather have had fuller results of original experience. The chapter on this subject may well be extended and amplified. The concluding pages of the book are devoted to brief notices of the chief places east and west of San Remo.

We would offer but one criticism on this charming work. Why should Dr. Hassall have added to the horrors of the mosquito, that veritable, if minor, pest of the Mediterranean littoral? As a scientific man, he no doubt held it a duty to mention the recent discovery of the mosquito being a medium of inoculating the human species, in certain climates, with a peculiar parasite which infests the blood. So far as we are aware, the mosquito of the Western Riviera has not as yet been found guilty of this practice.

Those who go to winter at San Remo should take with them a copy of Dr. Hassall's book. The historical and descriptive introduction, written in a pleasing style, will familiarise them with their new home; while the sections on the geology, botany, and natural history of the district will suggest profitable and scientific recreations for their term of expatriation.

Atlas of Histology. By G. E. KLEIN, M.D., and E. NOBLE SMITH. Part VIII. Smith and Elder. 1879.

THIS part contains illustrations of the structure of the bloodvessels and of the lymphatic glands, of both of which a full account is given in the text. The wall of the capillaries is described as consisting of a thin elastic endothelial membrane—that is, a single layer of nucleated cell-plates, the individual cells being united by an albuminous interstitial cement substance, which in silver-stained specimens appears as dark lines separating the cells.

The process of diapedesis of coloured corpuscles described originally by Stricker, and of emigration of white corpuscles described by Cohnheim, is considered by the authors to be due in the first instance to abnormal distension of the capillaries. This distension causes the interstitial cement substance connecting the cells forming the wall of the vessel to yield at many points, and minute openings, called stigmata by Arnold, make their appearance, and then, after a time, become gradually enlarged into stomata. The walls of young capillaries are stated to be endowed with a power of active contraction.

It is a rather curious circumstance that a difference of opinion exists upon the matter of fact whether many of the larger arteries, as the renal, splenic, mesenteric, axillary, femoral, and popliteal arteries, do or do not possess longitudinal fasciculi of unstriped muscular tissue in their adventitia and tunica media or not. Possibly the development of muscular tissue in these arteries varies with the general muscular development of the individual, or there may be racial peculiarities, for we presume that good histologists would have no difficulty in recognising the tissue when presented to them. There is no doubt that there is a well-marked and continuous muscular coat composed of longitudinal fasciculi on the inner surface of the tunica media. Direct communication between minute arteries and veins, without the intervention of capillaries, is said to exist in various places, as in the matrix of the nail, in the tip of the nose and tail of some mammals, in the tip of the fingers and toes of man, in the margin of the ear-lobe in the dog and cat, and especially in the rabbit.

The description of the lymphatic glands presents little requiring special comment, and is in accordance with the statements found in most recent text-books.

We should like to call the attention of the authors to the text, which in some parts sadly wants the revision of a practised writer. Dr. Klein, as a foreigner, cannot be expected to be acquainted with the niceties of the English language, and may readily be excused for any failure in literary execution, but it is Dr. Noble's duty to see that the sentences do not, as in the following instances, present the appearance of being a literal translation from the German:—"While in the smallest arterial branches the muscle cells are arranged in a single layer, also the numbers of these layers increases." "In a section through a hardened artery that had been kept distended by blood or otherwise, the muscular coat will appear much thicker than if the vessel had been allowed to shrink." Throughout the matter is excellent, but the style is too frequently awkward.

On the Surgery of the Face. By FRANCIS MASON, F.R.C.S., Surgeon to St. Thomas's Hospital, &c. London: J. & A. Churchill. 1878.

THIS book is a reprint of the Lettsomian Lectures of the Medical Society of London for the session 1877–78. As the lectures have already appeared *in extenso* in our columns, it is scarcely necessary to do more than call attention to their publication in a separate form. We may, however, point out that the work does not merely comprise the text of the lectures, but, by virtue of one hundred excellent wood engravings, it forms a good and useful atlas of the more important surgical diseases and injuries of the face. The circumstances which led to the collection of the materials contained in these lectures necessarily precluded detailed and elaborate descriptions and expositions. So far the published work is incomplete as a treatise on the Surgery of the Face. Indeed, it deals only with *some* of the surgery

of the face. This being so, it would be ungracious to complain that the book is not different from what it pretends to be. While conceding the difficulty of the task of choosing and selecting the points to be noticed and those to be passed over, we must confess that, in our opinion, Mr. Mason has not always hit upon the most suitable subjects. For instance, we would gladly spare the poor and inadequate compilations on erythema, roseola, urticaria, lichen, herpes, eczema, psoriasis, parasitic diseases, acne, boils, &c., of the face, for a short notice of rodent ulcer, which is not even mentioned.

It is only just to remark that the publishers have not failed in their endeavours to make the book attractive.

Lectures on Practical Surgery. By H. H. TOLAND, M.D., Professor of the Principles and Practice of Surgery and Clinical Surgery in the University of California. Second Edition. Illustrated. London: Trübner and Co. 1879.

THE preface of this book explains that Dr. Toland was requested by his pupils to write a text-book of surgery, but feeling unable to undertake such a task, he agreed to "talk a book that should contain the principles of surgery, with illustrations from his own experience." The lectures were evidently delivered without much careful preparation, and bear obvious marks of being, in most cases, quite extemporaneous productions. We look in vain for a thorough discussion of any one subject, nor do we find the clear rules of practice or valuable practical hints such as we naturally look for in lectures from one who often repeats that he has had long and extensive experience in his profession. A number of more or less interesting and striking cases are referred to, but the value of these references is greatly lessened by their want of accurate detail. As examples of the style of the work, we will make one or two quotations. In reference to the treatment of wounds, Dr. Toland says: "As soon as an operation is completed, and before the hæmorrhage has been arrested, administer a full dose of sulphate of morphia. I think this is more important to success than the skilful use of the knife, the careful adjustment of the dressings, or, indeed, everything connected with the operation combined." The diagnosis of aneurism is in no way fully entered upon, but we are told that the pulsation in an aneurism "*generally* corresponds with pulsations of the heart," and that "sometimes, if the ear be applied to the tumour, a bruit can be detected, which is called the aneurismal thrill." No one perusing these so-called lectures can fail to regret that the labour expended upon them had not been concentrated upon a few, and thus been of far greater service to the students and profession. As they are, they add nothing to our knowledge, and are hardly worthy of the great American School of Surgery.

The Student's Guide to Surgical Diagnosis. By CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, and Surgeon to University College Hospital, London. J. and A. Churchill. 1879.

THIS little book is an attempt to give the student the aid he requires to form an accurate and rapid diagnosis of surgical cases. Teachers who have tried to do this will be ready to acknowledge the difficulty of the task Mr. Heath has undertaken, and those who are familiar with Mr. Heath's teaching will be prepared to find in this book a thoroughly practical attempt to cope with the difficulty. The introductory chapter contains some valuable "Heads for Reports on Surgical Cases," prepared by Mr. Godlee, which have been in use at University College Hospital for some years. Each region of the body is dealt with in a separate chapter, and the main salient features of each of the common affections are then enumerated in single paragraphs, and there are several tables in which the signs of similar diseases are compared. The book will be of use to students after they have read larger works, and before presenting themselves for examination, and will, no doubt, be improved in later editions.

HEALTH OF LARGE ENGLISH TOWNS.

THE FORTIETH WEEK OF 1879.

ENGLISH mortality, judged by the Registrar-General's urban statistics, showed an increase last week on the low rates that have recently prevailed. In twenty of the largest English towns, containing nearly a third of the native population of England and Wales, 5091 births and 2818 deaths were registered in the week ending last Saturday. The births were 91, and the deaths no less than 552, below the average weekly numbers during 1878. The deaths, however, showed an increase of 155 upon the low number returned in the previous week, and were more numerous than in any week since the end of May last. The annual rate of mortality in the twenty towns, which had been equal to 19·4 and 18·8 in the two preceding weeks, rose to 19·9 last week. During the thirteen weeks ending the 27th ult., the death-rate in the twenty towns averaged only 18·3 per 1000, against 23·1, 20·6, and 23·8 in the corresponding periods of the three years 1876–7–8. So low a summer death-rate in these towns is without a recorded precedent. The lowest death-rates in these towns last week were 15·0 in Portsmouth, 15·4 in Leicester, 15·7 in Leeds and Nottingham, and 15·8 in Brighton; while the rates ranged upwards in the other towns to 24·0 in Bradford, 25·5 in Manchester, 26·1 in Salford, and 26·5 in Liverpool. The deaths referred to the seven principal zymotic diseases in the twenty towns showed a further decline last week to 490, from numbers ranging between 654 and 520 in the five previous weeks; 152 resulted from diarrhœa, 146 from scarlet fever, and 68 from fever, principally enteric. The annual death-rate from these seven diseases averaged 3·5 per 1000 in the twenty towns, and ranged from 0·0 and 0·7 in Portsmouth and Wolverhampton to 5·3 and 5·5 in Newcastle-upon-Tyne and Norwich. The deaths referred to diarrhœa continue to decline, and differ but slightly from the average number for the season. The fatal cases of scarlet fever in the twenty towns, which had been 94, 118, and 144 in the three previous weeks, were 146 last week; they showed a further increase and the largest proportional excess in Liverpool, Sunderland, and Newcastle-upon-Tyne. Of the 16 deaths from diphtheria, 8 occurred in London and 8 in the nineteen provincial towns; the latter included 2 in Liverpool and 2 in Manchester. The deaths referred to fever rose to 68 from 37 and 54 in the two preceding weeks; the mortality from this disease was somewhat greater in London than in the provincial towns. Small-pox caused four more deaths in London (including two of unvaccinated children in one family at Hackney), but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals continues to decline; on the 4th inst. they were but 45, against numbers declining steadily from 111 to 56 in the six preceding weeks. Four new cases of small-pox were admitted to these hospitals during last week, against 6 and 7 in the two previous weeks.

SCHOLARSHIPS.—At St. Bartholomew's Hospital Mr. Henry Lewis Jones, B.A. of Caius College, Cambridge, and Mr. T. W. Shore, Southampton, have obtained the Open Scholarships in Science, value £130 each, and Mr. Thistleton that of £30.—At the Middlesex Hospital Mr. C. H. Forbes has obtained the Entrance Scholarship of £25, and Mr. A. W. Ogle that of £20, each tenable for two years.—At Westminster Hospital Mr. H. V. Hart has obtained the Houldsworth Entrance Scholarship of £100 (£50 per annum for two years), and Mr. J. Swain that of £20.—At Guy's Hospital Mr. G. E. Halstead has obtained the Open Scholarship of £131 5*s.*, in classics, mathematics, and modern languages, and Mr. W. Fowler, B.A., that of £131 5*s.*, in chemistry, physics, botany, and zoology.

THE LANCET.

LONDON: SATURDAY, OCTOBER 11, 1879.

IT is time we began to speak very plainly on the subject of the "meddle and muddle" policy and its effects on the Medical Department of the Army. We use the term "department" in its general significance, as the few remarks it is desired to offer are suggested by considerations which took their rise anterior to the incorporation of the medical service as a separate branch of the military system.

The muddle commenced when Lord (then Mr.) CARDWELL, a civilian, began to meddle with the service, and boldly undertook to reform and mould it into "one harmonious whole." The short-service scheme—in its new inception a nightmare caused by brooding over the supposed superiorities of the German system without the moral courage to propose the compulsory rule for adoption in England—had been tried at the commencement of the present century, and failed. The archives of Chelsea Hospital contain the proofs of this assertion. It was then a device to get men. It was revived by Mr. CARDWELL as an expedient to save money. The proposal was warmly discussed at the time, and the country did not approve it, but with the might of a Parliamentary majority the Bill empowering the Government to repeat the experiment was passed. Let anyone who is in doubt as to its results inspect the ranks of weedy boys of which the British army—so far as it has been reconstituted—is now composed, and let him follow out the inquiry by testing the tempers and scanning the prospects of the men discharged from the Reserve at the end of the second period of six years—at the expiry of the twelve,—with the grievance caused by the loss of their retaining allowance of fourpence a day. As to the abolition of the purchase system—as a means of providing officers of social position and authority for the army and a measure securing fairly rapid promotion—we will say nothing except to recall the significant remark of Prince BISMARCK, to the effect that it was the only good thing about the English military system. The perpetual disturbance of regimental relations intentionally produced by the periodic transfer of combatant officers from one command to another, is only one of the fruits of Mr. CARDWELL'S idea. We refrain from comment on this subject, as also upon the abolition of the regimental system in relation to the service of medical officers. The time for useful criticism on these topics is probably past, albeit the experience of the last twenty years has demonstrated that the rule of red tape is not as unchangeable as the laws of the Medes and Persians. The meddling goes on and the muddle grows deeper and more irremediable as time progresses.

It is not, however, so much to the past troublings as to the present disquietude of the army we desire to draw serious attention. Our primary concern is, of course, with the medical branch of the service and with the plight of our brethren who are under contract with the Crown to maintain the health, secure the utmost sanitary efficiency, and economise the lives of Her Majesty's land forces, and who are required to discharge their onerous duties shorthanded and in circumstances of difficulty and embarrassment, mainly due to the parsimony of the Government. Let it be distinctly understood that, whatever we have said in the past, or may say in the future, our purpose at this moment is to suspend criticism on the system and policy extant, and limit ourselves to the contention that the situation—deadlock as it may fairly be called—is both illogical and absurd.

If Viscount CARDWELL'S reforms were unwise, and what has sprung from them—including the existing system of medical service—is unsuitable, or regarded with disfavour by the present Government, let the Secretary of State for War be empowered by the Cabinet to bring in a measure of reconstruction! This would be an intelligible policy, and in the name of the medical profession we may take it upon us to say that any proposal so made would receive cordial consideration; in some not unimportant quarters it would probably be hailed as the breaking of morning light after a night of storm and anxiety. However that may be, the Government would be acting within its right by pursuing the course suggested. There is only one other line of policy which can be deemed statesmanlike or even honest—namely, to carry out the measures obviously necessary to perfect the existing system. As matters now stand, it is impossible not to recognise an ugly parallelism between the bearing of the Government towards the army system—and especially the Medical Department—and that of a certain political party in France towards the Republic. They are afraid to attack it, but they hope it will not prove to be permanent! They would like to starve it into premature decrepitude, and so bring about a state of things in which even its warmest adherents would be obliged to disown it. We do not assert that this is the policy of the Government, but the hesitation shown by the Treasury in complying with the modest demands of those who are trying to render the system extant workable certainly points to the inference suggested.

If we mistake not, the country is in no mood for trifling with the efficiency of our scanty forces. The army is not so thoroughly contented as to regard with composure the carelessness evinced with respect to the fate of the sick and wounded soldier; and we are well assured the medical profession is not disposed to parley interminably with authorities officially charged with the duty of trying to appease with a stone the cravings of the department for bread. If the junior members of our profession are well advised—and we venture to think they will be—no overture for candidates is likely to be met confidingly by an adequate response until the conditions of medical service in the army are finally readjusted on the basis of a Warrant which can neither be cancelled nor disingenuously allowed to fall into disuse. Any Warrant now issued must be a *bonâ fide* basis of contract, not be simply flourished as a lure. It is disagreeable, but indispensable, to speak out plainly on this point, and on the subject, as a whole, it is, as we have said, time to risk transgressing the amenities of polite journalism, and use forms of expression which cannot be misunderstood. The medical men of the country, the young men waiting to enter the service if it is placed on a footing of justice, and those who bear the yoke and strive painfully and heartlessly to do their duty, are weary of the policy so long pursued,

and are looking anxiously for the time—perhaps not far distant—when all this child's play with grave interests may be brought to a close. Give up the scheme of reorganisation or proceed with it. Either procedure must be better than a policy of hesitation and delay at once contemptible and absurd.

THE President of a Board which does not exist, excluded as a rule from the Cabinet, having to subordinate his measures to the whims or conveniences of the chiefs (nay, even subordinates) of other more influential departments, overshadowed by his colleagues in debate, and liable to have his most important functions traversed at any moment by them—as in the instance of the recent alarm of plague, when the Privy Council, reviving an obsolete law, over-rode existing arrangements under the public health law, and again, when, in the instance of regulations of dairies in view of the prevention of the dissemination of diphtheria, scarlet fever, and typhoid through infected milk, the same Department intervened,—such, in brief, according to Mr. F. S. POWELL, in his address on the 4th inst. as President of the Health Department of the Social Science Association, is the President of the Local Government Board, our Health Minister. "He must needs administer under a sense of his secondary position," and it is natural that the efficiency of his department should be injuriously affected by the anomalies of that position. In other words, the faults of that department are not so much faults of its administration as faults of the perverse and narrow view of public health requirements entertained by the Government as a whole, and a certain disloyalty to the Health Department of the Government by other departments. Of this disloyalty we have referred to two examples; of the perversity Mr. POWELL supplies us with an illustration. It devolves upon the Local Government Board to carry out, with a view to the most efficient means of repression, researches on the influence of noxious trades upon health, such as those which Dr. EDWARD BALLARD is engaged upon; but, so far as these relate to works falling within the provisions of the Factory Acts, the officers engaged in supervising the execution of those Acts, and who are under the Home Office, "continue their duties without reference to the researches of Dr. BALLARD, and only by accident, or under the influence of some unofficial enthusiasm, learn that such investigations have occurred." Here is another illustration, which we had occasion to dwell upon not long ago. Notwithstanding the invaluable work done years ago by the Local Government Board in relation to privy construction and regulation, with regard to the abatement of the excrement nuisance, and which has now long formed the rule for the guidance of the sanitary authorities of the kingdom, this work has been entirely unknown to, or wholly ignored by, the Education Department of the Privy Council; and with the mischievous result, that inspectors, school managers, school masters and mistresses, and school architects, have been and actually are counteracting the work of the sanitary authorities in abating privy nuisance.

Mr. POWELL clearly sees, as we have long urged, that a primary consideration in more efficient health-administration throughout the country is a fundamental change in the position of the Health Minister. "To my mind," he observes, "the change has appeared a paramount necessity." He urges that the minister who deals with public health should be put upon an equality with those who are entrusted with the most weighty responsibilities of Government, and enjoy a dignity and occupy an acknowledged position corresponding with their high functions. We entirely agree with him in this, and that the energies of sanitary reformers should be concentrated upon securing this reform, as an essential preliminary step to the successful prosecution of measures for co-ordinating existing public-health legislation, and extending it.

DUBLIN is at length permitted to indulge in the privilege it has so long desired of a Royal Sanitary Commission. The notion that a Royal Commission might possibly unravel the almost hopelessly tangled skein, as it would seem, of the city's sanitary administration in respect to sewerage matters, appears first to have been broached in 1874; but it has not borne fruit until the present autumn. The Commissioners appointed are Mr. ROBERT RAWLINSON, C.B., superintending engineer of the Local Government Board, England; and FREDK. XAVIER MACCABE, M.D., one of the inspectors of the Local Government Board, Ireland. The Commissioners have entered upon their somewhat formidable task, and whatever may be the ultimate practical result of their labours, the Dublin people will be alone in fault if they do not derive much profit from them (not to say amusement) in their progress. We on this side St. George's Channel have scarcely less interest in the proceedings of the Commission than dwellers on the other side; for the senior Commissioner, Mr. RAWLINSON, has thought it advisable to use some of his English and Irish experiences as a foil for his present Dublin experiences, and it must be confessed that the capital of the sister isle appears to the greater advantage in the contrast as thus presented. Some very strong and unqualified language is used by the Commissioner in condemnation of much that exists in the sanitary conditions of numerous dwellings in Dublin, but we learn from him that like bad and dangerous conditions existed in the houses of the Irish nobility at too recent a date to justify indiscriminate reprobation of the state of things in Dublin. Nor is this all. Not a single nobleman's house in London, according to the Commissioner, has had its drainage arrangements overhauled of late years but they have been found in as bad a state as could be. Nay, even the drainage of the Prince of WALES'S own residence, Marlborough House, was found in so wretched a state two years ago that £6000 had to be expended to put it right. Still more recently, the residence of the late Lord Lieutenant of Ireland, Earl SPENCER, in James's-street, had to be dealt with as Marlborough House had been dealt with, the basement being found to contain a mass of corrupt and cesspool matter. Again, another nobleman (name unmentioned, but living near St. Albans) had found it requisite to have new sewers and drains put down on his premises at a cost of £3000. Still again, the Commissioner mentioned an expenditure of three-quarters of a million in the improvement of the sanitary arrangements of "a sovereign's palace, so as to make it a fit residence for royalty"—(is it possible that Windsor is alluded to here?)—adding, we were not, therefore, "to blame the poor people for not being better, when they had

no example to make them so until recently." (We quote from the report given of the proceedings of the Commissioners in the *Irish Daily News*.) But the lessons derived from England for the benefit of Dublin did not end with illustrations of the shortcomings of the Royal Family and persons of noble birth, but were taken also from other stations of life. The Commissioner had seen "tenement houses in Dublin as bad as could possibly be," but he had not seen anything worse in Dublin than he had seen in England. "He had seen things as bad in what was called rich England as he had seen in Dublin." He told the Dublin people this "that they might not despair." Again, it had been given in evidence before the Commission that in 1866 there were in Dublin 1379 houses unprovided with sanitary accommodation; but Mr. BOYLE, the Secretary to the Public Health Committee of the Corporation, must have felt thoroughly ashamed of the pettiness of the fact, when it was immediately capped by Mr. RAWLINSON by a statement that he had known in England in 1850 (!) a town of 22,000 population of whom no less than 18,000 were without sanitary accommodation.

Dublin, its corporation and people, may indeed take consolation from these facts laid before them for their comfort by the senior Commissioner. Dublin is far too loyal a city to be, in sanitary matters, in advance of, or even to tread too closely upon the footsteps, of sovereignty and of the heir-apparent, and too polished to be guilty of such an impertinence as to endeavour to excel a lord lieutenant and its own aristocracy, putting the English aristocracy out of account. Moreover, Dublin, according to the Commissioner, is not a bit worse than her neighbours across St. George's Channel; and if she has sinned in sanitary matters, she has sinned from want of the better example they should have set her. Then why all this local pother, she may say, and why, above all, a Royal Commission, of which the senior member discovers at once that Dublin is no worse in sanitary matters than her neighbours, and indeed on the whole rather better?

NOTWITHSTANDING the attention that has been bestowed upon the subject, the source and mode of development of the red blood-corpuscles is still shrouded in much darkness. That they really do grow is sufficiently shown by the rapidity with which even large losses of blood are repaired, and it seems to be generally admitted that they proceed from the white corpuscles in which some kind of metamorphosis has taken place; the white corpuscles themselves being the product of cell-growth in the ductless glands, in the lymphatic glands, the medullary tissue of bones, and in the connective tissue of various organs. The chief difficulty in the way of this explanation of the origin of the red corpuscles is the comparative absence of intermediate stages, especially in the higher vertebrata, between the very well characterised, actively moving, nucleated, and spheroidal white corpuscle, and the non-nucleated, biconcave, and motionless discoid red. For although white corpuscles have been seen with a tinge of red, more or less flattened, and with other features approximating them to the red corpuscles, the number of them is comparatively small, and scarcely sufficient to account for the constant succession of new red corpuscles, which we must suppose are being constantly added to the general mass of the blood. In addition to this, the white corpuscles appear to have functions of their own, as shown by their passing through the walls of the vessels, and wandering through the tissues, where they retain, for some time at least, their peculiar characters.

Recent observations by M. HAYEM have opened up new views on this point, and, from careful and long-continued microscopical research, he has been led to admit a third form of corpuscle, the hæmatoblast, to which the red blood-corpuscle owes its origin. His observations have been conducted both on the higher and the lower forms of vertebrata, and the series that we propose at present to notice, and an account of which he has just published in the *Archives de Physiologie*, deal with the development of the blood-corpuscles of those vertebrates that have nucleated red corpuscles, the pyrenæmata of GULLIVER, or ichthyopsida and sauropsida of zoologists. On exposure of the mesentery or tongue of a frog to the air, the circulation becomes troubled and slower, and it is then easy to see, amongst the red corpuscles, colourless corpuscles, very different in aspect from the white corpuscles. These bodies are borne along with the current of the red corpuscles, without any tendency to rest in the quiescent layer, and, instead of presenting the spheroidal form of the leucocytes, are elongated, slightly flattened, and already somewhat discoid. When seen in profile they appear as ovoid bodies, with one end prolonged to some extent. These are the young red globules or hæmatoblasts. They are not deficient in elasticity or suppleness, since they can make their way through a narrow passage, with some change of form, resuming their natural aspect on being relieved from pressure. Their surface is smooth, homogeneous, slightly cloudy, and with a less silvery reflex than the white corpuscles. They sometimes present a central darkish spot, occupying the position of a nucleus, near which are one or two bright granules. If a specimen of recent blood be examined on the warmed stage, the hæmatoblasts retain for some seconds the appearances above described; but they soon become remarkably viscous, and, whilst adhering to the slide at some point, they are stretched by the movement of the plasma, sometimes to an inordinate length, or, if they come into contact with one another, they stick together, and become a kind of centre around which the red corpuscles dispose themselves concentrically. They then quickly become altered in appearance, and lose their distinctive features. If it be required to examine them under the microscope outside the vessels, the stage, instead of being warmed, should be cooled to freezing point, and they then retain their characters for several hours. Even then, however, after a time, they become prickly with short pale processes, and lose by solution or fragmentation a part of their disc, the nucleus at the same time becoming more sharply defined and more granular. They preserve their characteristic features best in iodised serum, and when measured they are found to vary considerably in size, some being much smaller than the ordinary white corpuscles, others larger and very elongated, whilst many have a very distinct yellowish tint from the presence of hæmoglobin. The larger they are the more resistant are they to the action of saline and other solutions. The smaller specimens soon become pale and indistinct in water, and then disappear altogether, the nucleus first becoming spherical and very

large. They can be rendered insoluble by the addition of solution of mercury chloride of a particular strength, the formula of which is given.

M. HAYEM dwells on the relations that the hæmatoblasts, after withdrawal from the bloodvessels, bear to the formation of fibrin, and shows how the delicate filaments observed in the coagulum of frogs' blood are, in part at least, derived from the processes of these peculiar structures.

Whether M. HAYEM'S results be corroborated by other observers or not, it is quite evident, both from his researches and from those of M. LOSTORFER and Dr. RICHARD NORRIS, that the microscopical characters of the blood have not been fully mastered, and that this fluid still presents an inviting field to the naturalist, which has the advantage of being always accessible and easily worked.

WE have lately directed attention to the fact that the Metropolitan Asylums, which were created for the better accommodation of paupers suffering from infectious diseases, are being largely used by the general public—at any rate, by members of a class that had never, up to the time of their admission into these hospitals, been recipients of parish relief in any form. Special inquiries instituted by the General Purposes Committee of the Asylums Board showed on the 15th of February, 1877 (in the middle of the epidemic of small-pox, 1876–77), that the proportion of patients in the asylums of the Metropolitan Board who acknowledged having previously received parochial relief was under 10 per cent. In other words, in those essentially pauper hospitals 90 per cent. of the people who were being accommodated were not, and never had been, paupers; but they became such by their admission into these institutions.

Since our article on this subject, and at the end of a Bill for various miscellaneous purposes, a clause was introduced which somewhat changed the character of the non-pauper class of patients that may henceforth be received into these asylums. The provision in question is to this effect—it gives power for the Metropolitan Asylums Board, with the approval of the Local Government Board, to contract with any local authority in the metropolis acting in the execution of the Nuisances Removal Act of 1855 and of its Amending Acts, "for the reception and maintenance in any hospital belonging to or under the management of such Boards of any person suffering from any dangerous infectious disorder within the district of any such local authority, and any person received into a hospital by virtue of any such contract shall be deemed to be maintained in such hospital by the local authority with whom the contract is made." It next provides that any expenses incurred by a local authority for the maintenance of any person under this section shall be deemed to be due from such person to the local authority from him, or from his representatives, at any time within six months after his discharge from such hospital. The Disqualification by Medical Relief Bill of last session further distinctly provides that persons receiving relief in a union fever hospital can ask to repay the guardians the cost of that relief, and on their doing so, the preservation of their electoral rights is secured.

These enactments are calculated theoretically to remove the objections of those who are unwilling to pauperise persons by giving them gratuitous medical relief, and of those persons who might refuse to go to infectious hospitals if by going they become paupers and part with their electoral rights. It is worthy of note that the clause we have quoted in the Poor-law Act, 1879, provides only for the recovery of the "cost of maintenance." It would be a fine point in law whether any charge for medical expenses might be brought under the head of "maintenance." The terms ought to be inclusive. It would clearly be difficult to "maintain" many patients in these asylums apart from the medical services which they receive, and it is hard to throw upon the medical officers the charge of quasi-private patients without giving them special remuneration. But when we look at the clause, and consider the freedom implied in the word "may," we are disposed to wait and see the operation of this new law before expecting from it any great things in the way of preserving intact the independence of those overtaken by infectious disease, which, next to drink, is perhaps the most pauperising influence. Many of our medical officers of health think that the preservation of the electoral rights of patients will go far to remove their objections to being removed to the hospitals for infectious diseases, but, coupled as this preservation is with the condition of payment, it may not be very operative.

The most important part of the Act—the Poor-law Act, 1879—as far as the metropolis is concerned, is that which seems to make the Metropolitan Asylums Board responsible for the provision of hospitals for dangerous infectious diseases. Hitherto the two or three great asylums of the metropolis have been in theory pauper establishments. The paupers may have been benefited by them and by the greater medical care which has resulted largely from our own exposures in 1866. But it would be very difficult to show that the general public has had any benefit from them. Infectious diseases have been as rampant as ever, if not more so. The isolation of the early cases in epidemics is a dream of medical officers of health that has not to any great extent been realised even when, as in the small-pox epidemic of 1876, they seemed to admit of isolation and to invite the attention of the medical officer of health. We shall hope for better results under the administration of the Metropolitan Asylums Board. It may take larger views of the disasters wrought by epidemic disease, and of the duty of being forearmed, than the vestries have done. Be this as it may, the better protection of London from infectious disease is now more a matter of administration than of law, and we shall look to the Metropolitan Asylum Board for better things than we have yet seen.

A SHORT time since we drew attention to the great difficulties, in many cases insurmountable, thrown in the way of duly qualified English medical men obtaining permission to practise abroad amongst their own countrymen. These difficulties are especially encountered in France, Germany, and Austria. We now refer once more briefly to this subject. A witness before the Select Committee on the Medical Act Amendment Bill is reported to have given evidence as follows:—"That while the profession is pressing upon the Government that reputable degrees should be admitted to France, for instance, and that English practitioners should be allowed to practise there, yet in this country no such

registration is allowed, and we are asking privileges for our graduates which are not accorded to the graduates of any other country." The above appears to us to be misleading, and calculated to have an injurious effect. It cannot be said with justice that the medical profession is pressing to be allowed to practise in France, or any other continental country, on the same footing, and with the same privileges, as the native medical men. Though doubtless many would like to see a well-considered law of international recognition of good diplomas, it cannot be said that there is any urgent demand in England for the right to practise in foreign countries. What is asked — and most reasonably and urgently asked—is that where a number of English-speaking people are congregated in any town or city of France, for instance, the French authorities should accord a special permission to a British medical graduate to practise there amongst his own people, and not amongst the natives. This request is very different from the statement above-quoted; it is moreover perfectly just, and should be granted, if for no other reason, on the score of humanity; yet—confining these remarks to France alone, although that country is by no means the greatest offender—we would ask, What is the utmost concession that can be extorted from the authorities there, no matter what may be the professional status of the applicant? Permission to present himself for the examination, conducted in a foreign language, of *officier de santé*, the lowest of all French medical qualifications. English medical men do not seek to have their names placed on any French Register, but merely ask for an exceptional privilege, to be exercised by special permission under exceptional circumstances.

Supposing any foreign graduate to attempt to practise in France or Germany without the requisite permission, he renders himself liable to punishment and imprisonment; but what happens to the foreign medical graduate who comes over to England to practise—he, be it remembered, not confining his practice to his own countrymen, but extending it to the native population? He is allowed to do so without any interference on the part of the authorities: he may practise as freely as he likes; and the only disability under which he at present labours is that he cannot have his name placed on the Register—a disability which, practically, affects him only in the slightest degree. It is true he cannot recover in a court of law any disputed account, neither can he hold certain medical appointments; but how seldom is it that there is any difficulty about recovering a just account, and it would not be a very great hardship if it did occasionally happen that he failed to obtain what was due to him, since his general practice would scarcely be appreciably affected thereby. As to medical appointments, it would indeed be only under very rare circumstances that a foreign medical man would seek to obtain such.

The statement that English graduates are seeking to obtain concessions in France, Germany, and some other places, not granted to the graduates of other countries, amounts merely to this, that all graduates foreign to the countries above named are impartially treated in the same illiberal manner. The necessity for English medical men being allowed to practise among their own countrymen abroad is very much greater than in the case of any other nationality, because the English driven from their country in search of health outnumber, in many localities, the members of all other nationalities put together.

Annotations.

"Ne quid nimis."

HYPODERMIC "DRAM-DRINKING."

ABSTINENCE—i. e., the preaching of it, almost *usque ad nauseam*—is now the order of the day. We build coffee-houses, and abjure alcohol in every form and shape; at least, we are told to do so. We hear fearful stories about certain West-end establishments, where bottles and glasses are kept for the use of certain ladies who find it inconvenient, if not dangerous, to indulge alcoholic propensities at home. We know that the city matutinal glass of sherry at eleven o'clock, followed by intermittent drams throughout the working hours of the day, with the addition of bitters as the closing hours arrive, is by no means given up in the purlieus of Capel-court and Cornhill. The bad practice has been, it is now, and, as we believe, it always will be pursued. But alcohol just now is not our theme. Most medical men, and, unfortunately, many who are not accredited physicians or surgeons, know by this time that there are other ways (or, at least, another way) by which "man can put an enemy in his mouth to steal away his brains"; or, if not to steal, to congest, excite, and eventually spoil them. There is some danger that the race of opium-consumers will soon, though in a modified way, be revived and multiplied; and that, too, because science has discovered an inestimably gentle, scientific, and sound mode of relieving pain, which, unhappily, seems to be now inexcusably abused to a most egregious extent. We allude to morphia hypodermically. This new mode of administering the drug was favourably received at the outset; it advanced rapidly in professional favour, and is now so generally recognised that the stock instruments of physicians and surgeons are not considered complete without a syringe for injection under the skin. It would be well if this very useful instrument passed into no other than legally authorised hands. But unfortunately (to use a very mild expression) some members of our profession have chosen to instruct their patients in the use of the instrument, although they must have a full knowledge of the fact that opium, like alcohol, will accomplish (more slowly, perhaps, but not less surely) that which ruined Cassio, and thousands of human beings before and after his era. We consider such instruction to a male patient exhibits a grave want of discretion, and an act for which the medical attendant ought, in hardly any case, to make himself responsible. But (and we allude to this subject mainly on account of what follows) it is within our knowledge that physicians, and more particularly specialists, do in certain cases not only instruct clients of the other sex to manipulate the syringe, but give them one for private use at the close of the attendance, and explain the scale of minims required, &c. It is, of course, beyond our province to indicate what a medical man should or should not prescribe for his patient, male or female, in this or that disease. But most of our cloth know perfectly well the insidiously delightful sensations produced by hypodermic injections of morphia, how the patient comes to await his dose with earnest expectation, and, of course, when his own master, usually forestalls the hour at which it is directed to be taken. Given a member of the weaker sex of the upper or middle class, enfeebled by a long illness, but selfishly fond of pleasure, and determined to purchase it at any cost, there are the syringe, the bottle, and the measure invitingly to hand, and all so small as to be easily concealed, even from the eyes of prying

domestics. A stimulant dose is required at the beginning, and a soporific dose at the end, of the night's pleasure. We all know the almost inevitable result. Loss of appetite and of flesh, uneasy sleep with delirious mutterings, the dose in unprofessional hands almost invariably increased, and that rapidly, and, of course, all kinds of derangements of the organs below the diaphragm, as well, perhaps, most of those above it. Can any practitioner, with this knowledge before him, put into the hands of his client, how trustworthy soever she may be, so dire an instrument to steal her brains away?

We have embarked upon this distasteful subject very reluctantly, but with the knowledge in our possession (and, of course, in that of many of our readers), it seems right to sound notes of warning, if only to let the public as well as the profession know that there is "dram-drinking" other than alcoholic, and that the hypodermic variety is fully as insidious, as dangerous, and, in its continued practice, quite as inexcusable.

THE WATER-SUPPLY OF THE CITY.

IN a recent report to the Commissioners of Sewers, the medical officer of health, Dr. Sedgwick Saunders, directed attention to serious defects in the water-supply of the city. He stated that instances of deficient water-supply to the public waterclosets and premises occupied by the poorer classes were of frequent occurrence, and that no regard appeared to be given to the requirements of decency or comfort by the company responsible for the supply. In some cases the supply was cut off from crowded houses upon unintelligible pretences, whilst in others the water was withheld from places at which all the fittings demanded by the most exacting regulations were in good working order. In illustration of these remarks Dr. Saunders described the public waterclosets in Haberdasher-square, to which numerous people have recourse, as having been without water for four weeks. He also described a large factory in which one hundred females were employed, and in which the waterclosets were left on a given day without water, to the great discomposure of the factory, but without disturbance of the equanimity of the water company, in spite of the remonstrances of the proprietor. The moral of this is, of course, the inadvisability of the water-supply of a community being in the hands of a private company, and not in those of the local authority.

SCARLET FEVER FATALITY AND SANITARY CONDITION.

THE relation of sanitary condition to the varying fatality of scarlet fever and of other zymotic diseases is full of interest both from an epidemiological and a public health point of view. There is a too general tendency to look upon an attack of scarlet fever as all but inevitably incidental to childhood. Exposure to contagion, however, in the present condition of our sanitary organisation, is so difficult to provide against, especially in urban populations, that it is of the first importance to understand more definitely the conditions under which the disease sometimes assumes such an alarming and malignant type. Some of the local outbreaks of scarlet fever of which we read from time to time in the Registrar-General's reports signify an intensity of fatality that appears to require special explanation. During the past few months Barnoldswick, a small township of Yorkshire, which had in 1871 a population of little more than 3000 persons, has suffered from one of those remarkable local outbreaks of scarlet fever, which are eminently instructive to all who have any interest in sanitation. Nearly 200 cases of scarlet fever occurred in this small township, and 34 of them proved fatal. Barnoldswick is a fitting example of one of those smaller urban aggregations of manufacturing or mining population which are included in rural sanitary districts, and in which public health considerations are so frequently neglected by the local sanitary authority consisting of the Poor-law guardians. Barnoldswick is situated within the rural sanitary district of Skipton, which forms part of a combined sanitary district, of which Dr. F. W. Barry is the medical officer of health. The result of a careful inspection of the sanitary condition of Barnoldswick township, induced probably by the unusually fatal epidemic of scarlet fever, was to reveal sanitary neglect which would have explained even more fatal consequences than have occurred. The extent of cesspool nuisance, the defects of drainage and of water-supply, and the amount of overcrowding, appear to have been almost incredible. No less than 439 of the 638 houses constituting the town had actually no water-supply, and were obliged to purchase such water as could be had, much of which was open to grave suspicion of dangerous contamination. We are glad to hear that public interest in these matters is now increasing in the district. The sanitary condition of Barnoldswick, however, affords ample explanation of the exceptional fatality of scarlet fever during the recent epidemic; it also throws much light upon the fact, so often alluded to in the Registrar-General's reports, that health progress is far slower in rural than in urban sanitary districts. The neglect of sanitation in a host of small urban aggregations situated in rural sanitary districts, in its effect upon the national mortality statistics, counteracts to a great extent the undoubted recent progress in most of our large towns.

THE MAGAZINES.

IN the *Contemporary Review* for the current month, Mr. Henry J. Miller, in an article entitled "Lazarus Appeals to Dives," ably pleads the cause of the poorer classes, dwelling especially upon four matters which call for improvement—namely, the imperfect measures for preserving the health, saving the pocket, and improving the mind of the poor, and for affording them healthful and rational amusements. Mr. Miller does not stop at pointing out existing evils, with many of which it has, he tells us, been his lot to become personally acquainted, but he offers some valuable suggestions for their effectual and permanent removal. He urges the demolition of all "tumble-down rookeries," suitable dwellings being contemporaneously erected on sound sanitary principles, and the removal, to certain prescribed areas, of all horse or cattle slaughterhouses, and all other buildings of a noisome or offensive character. He further recommends the municipal authorities to preserve as many open spaces as possible; to *constantly* inspect lodging-houses; to lend a filter for the use of each household; to supply two boxes, one for "dry dirt," and the other for moist refuse, such boxes being removed at least once every week; to distribute chloride of lime for houses as well as for streets; and, lastly, to erect a furnace in a convenient locality for burning all infected or condemned articles.

Macmillan's Magazine contains a temperate article on "Vivisection" by the Rev. George Greenwood. It is refreshing to find a member of the clerical profession who does not take an absurdly narrow and unpractical view of vivisection. It would appear that, with certain qualifications and restrictions, very hard ones it is true, Mr. Greenwood would allow experiments on living animals—(1) for the purpose of demonstration; (2) for the acquisition of skill in operating; (3) for the verification of supposed facts or discoveries in physiology, which may seem to need confirmation; (4) for the discovery of new facts in physiology or biology; (5) to ascertain whether surgical operations hitherto untried are practicable, and are likely to prove safe and successful; and (6) to study the nature, progress, action, and treatment or remedies of diseases, poisons, and other influences injurious to the human body. While Mr. Greenwood is

an uncompromising supporter of the Act of 1876 he does not look with any degree of favour upon those who cry out for the total abolition of vivisection, and, as a means to compass that end, make injurious personal attacks, and placard the walls with horrible representations of animals fastened down and tortured, without one word as to the narcotics, which, in ordinary cases, prevent their suffering, or as to the good purposes for which it is endured.

Belgravia has an instructive though rather fantastically written article on spiders, called "Threads and Thrums in Lower Life," by Dr. Andrew Wilson. And those who have not read or heard enough of protoplasm within the last two months may find an article on this subject by the same author in the *Gentleman's Magazine*.

Those, again, who follow the speculations and vagaries of a particular set of latter-day nineteenth century philosophers, will find a thoughtful article in *Fraser* on "The Failure of Altruism."

BURNING UP THE OXYGEN.

INVENTORS and clever people generally are cudgelling their brains to discover a new light available for domestic purposes. It is well that those who try experiments with a view to this discovery should be on their guard. We have heard of one or two "successes" of the class indicated, which would be admirable, but that the illuminating agent is of itself sufficient to deprive the atmosphere of any ordinary apartment of the oxygen necessary to sustain life. A lamp with so large an appetite for the gas which human beings require to appropriate in considerable proportions, would be scarcely less injurious to the health of any household than a charcoal stove. It is an indispensable qualification for the acceptability of any new lighting apparatus or agency that it should not unduly prey upon, or poison, the atmosphere in which it burns. The first condition seems to be overlooked by some ingenious inventors who are fully alive to the second. A word of warning at this stage of the search may prevent disappointment later on.

POISONING BY "MUSHROOMS."

MR. J. ERNEST BULLOCK, resident medical officer of the Western General Dispensary, Marylebone-road, sends us the following case in illustration of the peril against which we recently warned the public:—"B. J——, a healthy-looking boy, aged three, was brought to me about 3 P.M. on Saturday, September 27th, his mother stating that he 'seemed to be in a fit.' He was thoroughly insensible, and lay quite helpless in his mother's lap. His eyes were wide open, and the pupils were enormously dilated and did not react at all to light. The complexion and expression of the face were natural. He uttered an occasional sound as if trying to speak, but stopped after failing to utter the first syllable of a word. The teeth were clenched, but could be separated by using a little force. The mouth was cool, and its secretions natural; the secretion of the skin was natural, and the pulse and respiration the same. He had no retching, nor tenderness over the stomach, and had not been sick; the bowels had not acted, nor had he passed any urine. He was quite unable to stand, and jerked the legs about a little, and occasionally the arms in the same manner. His mother stated that after his dinner he had gone out to play in Hyde-park, and was then quite well. On coming home he was noticed to stagger suddenly, and to look 'bewildered.' A passer-by carried him home, and he was immediately after brought to me. His sister, aged seven, who was with him in the park, showed me a number of small fungi which they had gathered in the park, and of which she saw her brother eat two or three on their way home. I ordered the mother to take him home and administer an emetic (ipecacuanha wine). Shortly after she returned to say that the child's teeth were tightly clenched, and she could not get him to swallow the medicine, but he appeared to be more conscious. On visiting the case, I found him lying quietly on his back; the pupils were slightly smaller, and he would take listlessly in his hand toys that were offered him, but soon let them fall. He would not speak, but seemed to know his mother. A few drops of urine had dribbled away from him. As there were no urgent symptoms and he was gradually recovering, I ordered him to have a dose of castor oil as soon as he could be got to swallow. From this the bowels acted in a few hours, and there were shreds of bloody mucus in the motions, but these were passed without pain. He passed water naturally. By the morning of the next day he was quite well. He was an intelligent boy, but had no recollection of what had happened."

THE ACTION OF PLATINUM.

THERE are few well-known metals the action of which has been less studied than that of platinum. Almost the only observations are those of Höfer, forty, and of Gmelin, fifty years ago. This gap in our pharmacological research has been, to some extent, filled by some investigations of Dr. Frederic Kebler, of Cincinnati, in the laboratory at Strassbourg, which have been published in the *Archiv für Experim. Pathologie u. Pharmakologie*. The observations relate to the action of platinum on both frogs and warm-blooded animals. The mode of administration was the subcutaneous injection of a solution of chloride of platinum neutralised by carbonate of soda. The first observations were made on frogs. The injections corresponded to from three to fifty milligrammes of platinum. The chief effects were found to be augmentation of the general sensibility; heaviness of voluntary movements; curving of the back when this or the head was stroked, sometimes with painful reflex extension of the hind legs on cutaneous irritation; increasing paralysis of the voluntary movements; spontaneous convulsive spasms of the extremities, or individual groups of muscles; weakened muscular irritability; loss of consciousness; and death. The convulsive contractions were not observed in rana temporaria. From these effects it would seem that platinum paralyses the voluntary muscles, but paralyses their movements before it affects the muscles themselves, apparently in consequence of a specific action on the central nervous system. At the same time, the centres are so stimulated that muscular spasm, and even convulsion, may result. The heart appears much less affected than the voluntary muscles, being scarcely interfered with, when death occurs.

In mammals, however, the action is somewhat different. The direct effect on the muscles is not perceptible. Death rapidly occurs from a paralysis of the abdominal vessels when a dose is administered such as might affect the muscles. In rabbits a copious diarrhœa is produced, and in dogs there are also vomiting and hæmorrhagic stools. In the former, post mortem, the mucous membrane of the stomach and intestine is hyperæmic, and in the latter the hyperæmia extends also to all the abdominal organs, including the kidneys; and the mucous membrane of the intestine is swollen and infiltrated with blood. The indications of an action upon other organs are less distinct. The muscular irritability was in all cases preserved up to death. In both kinds of animals indications of general paralysis were perceptible soon after the administration of the poison, expressed first in apathy and weakness, but increasing before death to complete powerlessness. In rabbits spasmodic contractions were noted, but only just before death, and never of the character of intense convulsions.

The paralysis of the abdominal vessels causes a diminu-

tion in the blood-pressure, which progresses to the end, and appears indeed to be the immediate cause of death. This fall in pressure is to be ascribed solely to the vascular paralysis, since the frequency of the pulse undergoes little change, and the other cardiac phenomena do not suggest any direct action of platinum on the heart. A dilute solution of platinum salt applied directly to the frog's heart produces no effect upon it. From this it is inferred that the fall in the blood-pressure is due entirely to the paralysis of the vaso-motor nerves. When the fall is but slight, soon after the injection, stimulation of the cervical cord brings the blood-pressure up to the normal. The greater the fall the slighter is the effect which such stimulation can produce upon it. Hence the action of the poison appears to be upon the muscular fibres or the peripheral nerve-endings of the vessels, most probably upon the latter. To this vaso-motor paralysis the other intestinal phenomena of platinum poisoning may be referred, and it would seem that the consequent anæmia of the central nervous system may be the cause of the nervous symptoms. But the phenomena presented by frogs, and some of the characters of the weakness in mammals, suggest that probably platinum has also a specific action on the central nervous system, and the nervous symptoms are due partly to this, and partly to the local anæmia. The fatal dose of platinum appears to be, for dogs 5 to 6 milligrammes, for rabbits about 10 milligrammes, per kilogramme of body-weight of the animals experimented upon.

THE THIRD INTERNATIONAL CONGRESS OF HYGIENE.

WE have received the preliminary programme of the third international gathering of sanitary reformers. The meeting will take place at Turin in April, 1880, under the patronage of the Italian Government. As at Brussels in 1876, and at Paris in 1878, the Congress will avoid political and religious discussion; but, by uniting competent authorities from all nations, seek to spread knowledge on sanitary matters. At the Paris Congress last year there were eighteen nationalities represented, the Russian, German, and other governments appointing special delegates. It is anticipated that the forthcoming Congress will be equally well attended. Medical men will, of course, form the majority of the Congress, but chemists and veterinary surgeons are to have a place reserved for them. Architects and engineers are also invited, as with them to a large extent rests the application of the principles which men of science have discovered. On the same ground, administrators, such as the chiefs of the sanitary police, or the managers of great water companies, will be welcomed, so that knowledge may be gained of the practical difficulties which hinder the realisation of accepted principles. The subjects to be discussed in the general meetings will be printed in detail, and distributed four months in advance. The members will also be divided into ten sections for the discussion of the following subjects:—1. General and International Hygiene. 2. Domestic or Private Hygiene. 3. Professional Hygiene. 4. The Hygiene of Schools. 5. Hygiene applied to Agriculture. 6. Hygiene applied to Manufactures and Industries. 7. Hygiene applied to Horses and Cattle. 8. Military and "Moral" Hygiene—that is, the consideration of the Contagious Diseases Acts, &c. 9. The Saving of Life from Drowning, Fires, War, Accidents, &c. 10. Architecture and Chemistry as applied to Hygiene. Such is the somewhat comprehensive scheme of the Congress; and the organising committee further add that an effort will be made during this gathering to institute a sort of union or federation between all the sanitary societies of Europe and America. If looked upon merely as an educational medium, the Congress will not fail to create a considerable sensation in a country where the mass of the people are profoundly ignorant of sanitary matters. The presence of a large number of illustrious foreigners in one of the most progressive towns of Italy, the banquets, the speeches, the lengthy reports published by the local papers, will all tend to awaken Italy to the necessity of improved sanitation. The good results will not, however, be limited to one locality; all persons assisting at such meetings gain in friendships cemented, in knowledge acquired—advantages so great that they are with difficulty estimated, but cannot be denied.

THE LOWER THAMES VALLEY MAIN DRAINAGE BOARD.

THE campaign of this Board was reopened in a stormy manner, as usual, on the 2nd inst., after the vacation, and its members appeared to have acquired a new lease of vigour and acerbity in the prosecution of their several crude designs. It will be in the recollection of those of our readers interested in the subject that the Board are now in the position of debtors to a very considerable extent, having been surcharged by the Government auditor some months ago to the extent of more than £2000 for sundry expenses in connexion with Mr. Heywood's scheme for draining the area that has to be dealt with; and, as things are now, it seems pretty clear that for this sum each and every member of the Board is individually liable. After a great deal of discussion, in which it appears that little or no unanimity existed among the members of the committee, it was settled by a narrow majority that a deputation from the Board should wait upon the Local Government Board, asking from the president advice upon the whole question. It appears that the members are now bound to Mr. Heywood's scheme, although it is perfectly clear that only a very small majority are in favour of it, so small indeed as to require the chairman's casting vote to settle matters. Under these circumstances nothing will be done unless that scheme is given up, at all events for the nonce, and a somewhat more open line of action taken in discussing the other systems submitted, and eventually choosing one of them.

THE MIDDLESEX HOSPITAL.

AT the distribution of prizes which followed the introductory address at the Middlesex Hospital, Professor Flower, F.R.S., presided. He said that it was a great pleasure to him to come there, for he could not but remember that if he had remained on the staff of the hospital he would by this time be holding the office of senior surgeon. Speaking of the examinations at the College of Surgeons, he remarked that in his day no one ever thought of being rejected, whereas now it was rather looked upon as exceptional for a man to pass without two trials. He spoke of the study of anatomy, and most strongly advised every student to provide himself with bones, and to learn them thoroughly before pursuing his dissecting-room work. Dr. Greenhow, in proposing a vote of thanks to Professor Flower, remarked that he had created the museum of the Middlesex Hospital, of which he was the first curator, before he was called away to fill the higher office in Lincoln's-inn-fields.

In the evening the students and friends of the hospital dined together at St. James's Hall, Dr. Temple Frere, formerly obstetric physician to the hospital, presiding. Upwards of a hundred guests sat down. The toast of the Middlesex Hospital was responded to by Mr. Oscar Clayton, that of the Middlesex Hospital Medical School by Dr. Greenhow; the "Lecturer of the Day" was proposed by Mr. J. S. Turner, and the "Past and Present Students," proposed by Mr. Critchett, was responded to by Mr. Lucas (lately resident medical officer) and Mr. Palmer (Broderip Scholar) respectively. The success of the evening was

greatly enhanced by the musical efforts of M. Anderson Critchett, Mr. Trelawney Cobham, and several others; the chief selections being from the "Sorcerer."

THE CHURCH ON MEDICINE.

CANON DUCKWORTH, in distributing the prizes at the Westminster Hospital on the 1st instant, took occasion to review the progress of medicine in the United Kingdom during the past decade, and, in a way that cannot but be satisfactory to those teachers who have the well-being of their school at heart. The Canon touched very briefly, but with great tact, on the advantages of the one-portal system, and seems to have got up the subject completely in all its bearings. But the part of his address that appeared, naturally enough, to tell best was comprised in the remarks made as to the practical aspect assumed by all physicians and surgeons. "If we are not in the van in scientific speculations and philosophic research, is it not true that we are foremost in our hospital practice?" That this is the case, at all events in the metropolitan schools of Great Britain, few, we think, can deny. The reverend doctor complimented hospital physicians in saying that they are "a long way the cleverest, and also the most upright and the most humane" of their class. Canon Duckworth meted out his praise in some cases perhaps too lavishly, but we commend to the deliberate attention of all his hearers and readers the very temperate, practical, and judicious remarks made on vivisection. Mr. Stansfeld and his supporters may read these remarks with profit, if not pleasurably; for they hit no one hard, and express, as we take it, the general opinion of most common-sense laymen interested in the subject.

CONGENITAL INGUINAL HERNIA OF THE OVARIES.

CASES of inguinal hernia of the ovaries are rare. Cases of congenital inguinal hernia of these organs are much more rare—so much so, indeed, that any case recorded as such should be looked upon with the gravest suspicion, unless positive anatomical proof of it be brought forward. That such cases may exist, however, must not be denied, for a portion of the uterus has been found in the inguinal canal together with the ovary, as in the case recently reported by Dr. Leopold in the *Archiv für Gynäkologie*. In this instance the ovary with the left horn of the uterus was removed, and then subjected to microscopic examination, when ovarian structure was discovered. Other cases, again, which have been supposed to be those of ovarian hernia, turn out, on further examination, not to be such—as, for instance, the interesting and valuable case read by Dr. Chambers before the last meeting of the Obstetrical Society. The patient, who was twenty-four years of age, and had the appearance of a woman so far as bodily development was concerned, had a lump in each groin as long as she could remember. She had a short conical canal like a vagina, at the top of which was the opening of the urethra, but no trace of uterus could be found on the most careful examination. She had never menstruated nor experienced menstrual molimen. The tumours in the groins were removed, and the patient recovered. The organs removed were examined microscopically, and found to be testicles in a somewhat imperfect state of development. The result of the minute examination appears natural when the anatomy and physiology of the organs of generation in the fœtus are borne in mind. The fœtal ovaries are very small when compared with the fœtal testicles, and present the appearance of a narrow thin band, and their position and connexions are such as to be very unfavourable to their descent into the inguinal canal. Moreover, inguinal hernia is comparatively rare in women.

On the other hand, in the fœtus, the testicles descend along the inguinal canal into the scrotum. They are known to be retained within the abdominal cavity in some cases, while in others they descend partially and take up their abode in the inguinal canal, failing to reach the scrotum. Besides, inguinal hernia is of not infrequent occurrence in males. In addition, malformations of the external genitals are much more common in males than females, and it is well known that the great majority of so-called hermaphrodites are imperfectly formed males. All these considerations form strong presumptive evidence in favour of any given case of supposed congenital inguinal hernia of the ovaries being really one of undescended testicles. In the case brought before the Obstetrical Society the microscopic examination made the presumption a certainty. In every instance where such certainty cannot be attained, the presumptive view should be adopted; for the interest and value of these cases lie not so much in their fitness for operative measures, as in the bearing they have and the light they may throw upon the physiology of the organs of generation. Cases of supposed ovarian hernia have been recorded as such without any distinct evidence of their true nature, and inferences have been based upon them with regard to ovarian physiology which are utterly valueless. Such cases should be entirely set aside, and in the scientific discussion of the physiology of the uterus and ovaries, regard be had only to those whose nature has been clearly established. Much obscurity surrounds the subject at present, but to introduce data which are worthless, because uncertain, is not the way to dispel it.

THE NEW EDINBURGH ROYAL INFIRMARY.

IT is a pity—almost a misfortune—that Royalty is not to be associated with the opening of the new Royal Infirmary. It is so near a misfortune that even now the association should be effected. The history of medicine in Scotland is much bound up with its Royal Infirmaries. The Edinburgh University is to have a splendid new start in getting its new Infirmary and its new Medical and Science Schools. The occasion is a national one, and should have the encouragement and the *eclât* which the presence of Her Majesty or some member of her illustrious family gives. The event is one of prime importance to Scotland, both in a philanthropic and an academic respect, and we will still venture to hope that, even at some sacrifice, it will have Royal sanctions. The new Infirmary is described as a magnificent stone building, designed by Mr. David Boyce, R.S.A., and built on the block system. It has cost £325,000, and the furnishing will cost £15,000 more. The different wards are being furnished by different professions, trades, &c. We hope many old students will make a contribution to the furnishing.

SCARLET FEVER CONVALESCENTS.

WHAT practitioner has not felt the difficulty of knowing what to do with a scarlet fever convalescent in fine weather? For the first month of his illness it is possible to keep him at home. But afterwards, in the absence of the too frequent sequelæ, he becomes impatient and possibly rebellious. And yet for one month more at least he has the deadly power of communicating the disease of which the community is more afraid than of any other zymotic. The Fever Hospital does a great public service in taking into its wards, on terms not remunerative, a considerable portion of such cases, to the great advantage of the families from which the patients come, and of the general public. In an epidemic year—in 1870 for example—it received 912 cases. In 1877, a non-epidemic year, it received 385. And it keeps its cases in till they are disinfected, or is willing to do so. But we still want a more rural place to which convalescents from scarlet fever could repair, with

advantage to themselves and with no harm to innocent and unsuspecting people, who are catching scarlet fever every day without knowing where or how. There are probably hundreds of patients annually in London whose friends would be thankful to pay for such accommodation. To whom shall we look for it? We know the problem commands the attention of some of the most earnest sanitarians amongst us. It appears to us that the Fever Hospital authorities might most easily and fitly provide such accommodation. It would be but a natural extension of the admirable work they are already doing. But they should have more generous support and payment than they have. We commend the project to them as one that could be best carried out by them, and we commend their present work to the sympathy of the wealthy and the benevolent.

A CURIOUS PRECEDENT.

THE *Cape Argus* of the 9th ult., in recapitulating the doings of the Capetown Parliament at the fag-end of the session, records that an oculist called Dr. Daumas, recently arrived in South Africa for the benefit of his own health, has been awarded a Government grant of £700 "to itinerate among the natives and exercise his skill." The Prime Minister, in supporting the motion, said that he (Dr. Daumas) "seemed very anxious to practise among the natives, and it was well known what an immense influence skilful medical men had over these people." Our readers will not be surprised to find that the learned doctor was "very anxious to practise among the natives," nor that the grant was carried by a very narrow majority; and, indeed, it appears strange that a Colonial Government overburdened with a considerable war debt, and one that considers £75 a sufficient salary for a district surgeon, should vote £700 to an itinerant oculist, in order that he may, so to speak, "keep his hand in" while he is recruiting his own health in a genial climate. The Cape will soon be an elysium for specialists as well as their patients, if this curious precedent is often repeated.

"EPIDEMIC DISEASE IN JERSEY."

IN some minor matters it would seem that the annotation on this subject, published in last week's LANCET, is likely to be misleading to those not intimately acquainted with the geography of the establishment in question, and its vicinity. The subsoil would be most correctly described as *sandy loam*, not *sand*, the former, of course, being less pervious than the latter. The new well, which was closed during the epidemic of typhoid, is situated on land adjoining that occupied by the institution. The water of this well has been analysed on behalf of the Sanitary Committee, and is reported as decidedly bad. And with respect to the nursing, it appears that, when the epidemic of measles commenced, an old woman was appointed as nurse, aided by the unskilled juniors mentioned last week. We correct these little errors (if errors they can be called) because it is well that at this stage of the proceedings no definite ground should be taken as to the actual exciting cause of the typhoid epidemic.

HOSPITAL SURGEONS AND OBSTETRIC PRACTICE.

WE have received a circular and a prospectus of a national association for prohibiting medical practitioners engaged in hospital practice, or the treatment of contagious diseases, from attending obstetric cases. Both the circular and the prospectus are a little too sensational in their tone. Nothing can be more praiseworthy than to urge the utmost care for the welfare of lying-in women. But it will be a very violent interference with the liberty of women in this state to dictate to them whom they shall *not* engage, especially when the prohibition is to be so large as to include nearly the whole medical profession. Are the reformers in question sanguine enough to think that Parliament will back them in refusing to a woman about to be confined the right to retain the services of a doctor whom she knows and trusts, albeit he may have a case of measles, or even scarlet fever, on his list? It would be a great comfort to many medical men to be relieved of the arduous duties of midwifery, but it would be a very questionable advantage for their patients. Nothing is more certain than that the mortality of women has been enormously reduced since midwifery passed out of the hands of midwives into that of medical men. It is the duty of medical men to use disinfectants, and go to extremes of caution to avoid risk, but it will be a bad day for lying-in women when the duty of attending them is devolved on any others than well-educated medical practitioners, preferably men, who are best fitted for the hard work of obstetric practice, and have most contributed to its present creditable efficiency.

RUSSIAN MEDICAL NEWS.

BY direction of the Empress, the Russian Red Cross Society will assist in the sanitary service of the Akhal-Teke expedition. It has contributed 30,000 roubles for this purpose, and appointed two medical officers, M. Saradjew and Dr. Presbrejevsky, and nine sanitary assistants. A Military Sanitary Society has been established in Finland. The medical community of St. Petersburg has been occupied in considering the question of the treatment of the sick of the city *par rayon*, in order that the population of the different districts may be able to secure medical aid at the moment it is wanted. It is proposed to parcel out the city, as it were, among the different practitioners, limiting the medical man's duties to the district which may be chosen by him, except in urgent cases and where consultations are needed. The establishment of a central dispensary is also under consideration. A new clinical institute, founded by the late Grand Duchess Helen Paulovna, is being erected in St. Petersburg. A recent report on the sanitary state of the province of St. Petersburg, exclusive of the capital, states that the medical *personnel* consists of twenty-six physicians, five assistants, seventy-two health officers, four medical women, and eighteen midwives of the first class and six of the second, among a population of 571,000. This is insufficient for the needs of the province, especially in the sparsely populated districts. The zemstovs of the province have appointed sanitary commissions, periodical meetings of the medical men, and a permanent medical statistical office, and have made arrangements for a general congress for the province.

DIPHTHERIA AT LOWER NORWOOD.

A RECENT outbreak of diphtheria at Lower Norwood, which gave rise to ten cases, five of which proved fatal, has been made a subject of inquiry by Dr. Archer Farr, the medical officer of health for the district. He passed in review, among other things, the milk-supply, water-supply, and the question of infection in relation to the group of cases, but failed to find a connecting link, and came to the conclusion that the worst and fatal cases were due to sanitary defects of the houses in which they occurred.

CRUSHED TO DEATH AS AN EXHIBITION.

A HIDEOUSLY fatal accident, which, setting aside the compassion every man will feel for the victim of a cruel death, must be regarded as disgraceful, has just occurred at Madrid. A snake-charmer, who allowed himself to be encircled in the coils of a huge boa-constrictor, as part of his performance, has through the caprice of the animal been crushed to death. There is nothing to be said on the sub-

ject beyond the expression of disgust that these exhibitions, involving the most obvious peril to life, are not interdicted. We live in so peculiarly fragile a house of glass in England with respect to this matter that we cannot prudently venture to throw stones.

MANCHESTER HEALTH LECTURES.

THE Manchester and Salford Sanitary Association have published a second volume of the Health Lectures for the People, promoted by them. The lectures contained in this volume were delivered in the session 1878–79. Dr. Dreschfeld discourses on the prevalence of Consumption in large towns, and how to diminish it; Dr. Ransome, on Long Life and the causes that prevent it; Dr. Simpson, on the Influence of the Mind on the Body in Sickness and Health; Dr. Holgate Owen, on Work and Recreation in their relation to Health; Mr. John M. Fox, on Defective Drainage as a Cause of Disease; Dr. Irwin, on Good Nursing, and its importance in the Treatment of Disease; Mr. John Watts, Ph.D., on the Loss of Wealth by the Loss of Health; and Mr. J. Corbett, on the Mode in which a Tenant may keep a Cottage healthy and comfortable. The several subjects are admirably treated, and the volume is peculiarly adapted for popular use.

THE LATE SIR THOMAS MACLEAR.

THE Cape Town Parliament has very properly awarded to the family of Sir Thomas Maclear a sum of money in recognition of the services rendered to the colony by this celebrated *savant*, than whom few, if any, have so extended our field of astronomical research in the southern hemisphere.

THE Sheffield papers report an inquest on the body of Mr. James Skidmore Saunders Bridgeford, a medical student, assistant house-surgeon at Rotherham Hospital. Mr. Bridgeford was much respected, and his death and the manner of it have caused much grief to his friends. His body was found in the canal at Kilnhurst. One of the witnesses testified to his having inquired of her the way to Kilnhurst. The night was dark and the way dangerous, and it is supposed that he accidentally fell into the canal. Dr. Foote, of Rotherham, represented the medical staff of the hospital at the inquest, and feelingly expressed the respect entertained for the deceased.

THE annual dinner of the staff and old students of the Westminster Hospital was held at the Westminster Palace Hotel on the 1st inst. Lord Campbell and Stratheden occupied the chair; and Canon Duckworth, who had previously taken the chair at the introductory lecture, was among the visitors. Several glees, beautifully rendered, added considerably to the pleasure of the evening.

WE understand that by the retirement of Dr. Gilchrist from the charge of the Crichton Asylum at Dumfries, an important appointment is now open to the psychological branch of the medical profession. We believe the resignation comes into effect on Nov. 11th, and that the Board of Direction is now occupied in making inquiries for a suitable successor.

CALCUTTA MEDICAL COLLEGE.

SURGEON-MAJOR K. MCLEOD, A.M., M.D., F.C.U., Professor of Descriptive and Surgical Anatomy, opened the session 1879–80 by the delivery of a learned address on the History of Anatomy in India. The earliest Hindu work on medicine, the "Ayur Veda," is supposed to have been compiled some 600 years before the Christian era. The greater portion of this work, held to be the most ancient medical treatise in the world, has been lost, but the main divisions and some extracts have been preserved by commentators. It appears to have been divided into six parts, one of which was devoted to anatomy. Other ancient treatises ("Charaka" and "Susruta") dealt with the subject, and, in fact, after a fashion, completed it. For while these treatises show that at the early period when they were written a not inconsiderable knowledge of the general anatomical construction of the human frame had been obtained, the writers, consistently with the mental tendencies of the time, aimed at framing a complete system, and buried the actually ascertained anatomical facts beneath a layer of mystical and fanciful conjectures. The system so framed became, in effect, part of the religious belief of its professors and of the people, and was handed down substantially unchanged until the English domination in India. In 1822 a beginning was made of efforts for the education of Hindus in European medicine, and this education necessarily included a more accurate knowledge of anatomy. These efforts were pursued under great difficulties, but with increasing success. In 1835 the Calcutta Medical College was opened, and arrangements were made there for the regular dissection of the human body during the winter session of 1836–37. The first Hindu of modern times who practised such dissection, and who was the pioneer in so important and essential an element in the study of rational medicine, was Pundit Modusudun Gupta, whose portrait adorns the theatre in which the address was delivered. On the 28th October, 1836, practical anatomy was fairly started in the college. On that day four of the most intelligent and respectable pupils, at their own solicitation, undertook the dissection of the human subject, and, in presence of all the professors of the college and of fourteen of their brother pupils, demonstrated with accuracy and nicety several of the most interesting parts of the body. The names of three of these gentlemen only have been recovered—namely, Raj Kisto Dey, Uma Charan Sett, Dwarka Nath Gupta. It was the first of these—Raj Kisto Dey—who, according to the testimony of his fellow-students, led the van in the most memorable victory over prejudice which Pundit Modusudun Gupta strove courageously and successfully to inaugurate. It is interesting to observe that, though the anatomy of Charaka and Susruta had been forgotten, their precepts and example were still powerful through the agency and advocacy of Pundit Modusudun Gupta to assist in the revival of a science and art which they had done so much to elaborate. "Since that period," the Medical College reported in 1839, "this most necessary part of medical education has been pursued with unremitting zeal by the students, and the dissecting-rooms of the Medical College of Bengal are not surpassed by similar establishments in other parts of the world." Medical schools now exist at Madras, Najpore, Patna, Dacca, Sealdah, Cuttack, Hyderabad, and Ceylon, and in each of these systematic and practical anatomy are taught up to the most recent standard and with the indispensable aid of dissection of the human body.

THE EXPERIMENTAL STUDY OF DISINFECTANTS.

THIS is the common-sense title of a very sensible pamphlet lately received, the author of which is Dr. J. Lane Notter, Surgeon-major Army Medical Department. The author, cognisant, as are many of us, and specially those engaged in sanitary work, of the uncertainty that exists in dealing with so-called disinfectants, has spent much time in endeavouring to arrive at a definite conclusion as to the actual and comparative value of the "would-be" disinfectants now in use. No less than fifteen agents formed the subjects of experiment—viz., carbolic acid in the crystal and liquid states, chloride of lime, chloralum, Condy's fluid, "universal disinfecting powder," terebene as a liquid and in green and yellow powder, sanitas, McDougall's fluid, phenyle, Burnett's fluid, eureka, and sporokton. We must, with humiliation, plead entire ignorance of some of the preparations named in the

foregoing list, save and except that their names have adorned the temporary mural erections in front of many unfinished buildings, and have formed a prominent subject for invitation cards of cheese-plate dimensions with which we have been favoured on frequently recurring occasions. We prefer, therefore, to cull from Dr. Notter's list the best-known preparations, and so have chosen carbolic acid, chloride of lime, Condy's fluid, terebene, McDougall's liquid, and Burnett's fluid. The author commences his paper by stating that "the term 'disinfectant' must be understood (in the following pages) to apply to agents which destroy by chemical action not only the decompositions which are casually connected with the presence of organisms, but the organisms themselves." A small quantity of beef infusion, swarming with bacteria, was made the subject of experiment, by adding to it certain known proportions of these so-called disinfectants. As to odour (the infusion had to be kept nearly three weeks), in no case was the offensive smell removed by any of the preparations above referred to. As to microscopic examination, the results of immediate examination were as follows:—

1. *Carbolic acid*—Bacteria living, but sluggish in movements.

2. *Chloride of lime*—Bacteria nearly all precipitated in filmy clouds of disinfectant; no movement observable.

3. *Condy's fluid*—Vibrio, spirillum, and other bacteria in active motion, equally distributed.

4. *Terebene*—Bacteria still very active.

5. *M'Dougall's fluid*—Activity diminished, but bacteria equally distributed.

6. *Burnett's fluid*—Activity of bacteria very much diminished.

Six other varieties of experiments were made with these articles under the following conditions, respectively:—

a. Infusion having been kept for nearly one month, the preparations thus obtained being placed in glass stoppered bottles, and examined by the microscope after an interval of twenty-four hours.

b. Treated in the same way as No. 1.

c. Treated in the same way, with prolonged exposure to light.

d. Ten per cent. of fresh albumen in distilled water added to the above samples.

e. A ten per cent. solution of each disinfectant mixed with a ten per cent. solution of recently made sulphuretted hydrogen having a strip of lead attached to the glass stopper.

f. Ten per cent. of each disinfectant mixed with a five per cent. solution of liquid ammonia in distilled water, having a strip of Nessler's paper attached to the stopper.

We have made as condensed an abstract as possible, descriptive of the experiments made, and the most important feature developed seems to be the antithesis of the deodorising power with the destruction of bacteria, which latter are acknowleged to be the actual producers of the putrefactive odour.

The facts ascertained (i. e., the results) may be thus simply stated in relation to the agents experimented with:

Carbolic acid subdued the offensive odour, while the activity of the quite free bacteria is persistent though diminished.

Chloride of lime destroyed the putrefactive odour and the bacteria themselves, no free bacteria being visible.

Permanganate of potash (Condy) presented similar microscopic characters, but the bacteria seemed to elongate, and torulæ were developed.

The terebene preparations destroyed the odour and precipitated the bacteria in flaky masses, but left some free, isolated, and almost motionless ones in the field.

Very similar characters were presented by M'Dougall's disinfecting liquid—the odour being affected to a very small extent, while the activity of the bacteria, though very slightly diminished, is persistent in the interspaces; while some are precipitated, others appear in the zoogloea form.

Burnett's fluid acted similarly, but a very slight odour remained.

This abstract may possibly assist medical officers of health and others to a satisfactory choice of some disinfectant.

THE Committee of the Birmingham General Hospital have proposed to commemorate its centenary (this year) by establishing a Hospital for Chronic Diseases in one of the suburbs.

THE FIFTY-SECOND ANNUAL MEETING OF GERMAN NATURALISTS AND MEDICAL MEN.

(From an occasional Correspondent.)

THE above meeting, which has just terminated its sittings, may be said to have been as successful as any of its predecessors. The gathering was not so large as was expected, nor were the arrangements, especially the organisation of the different sections, quite satisfactory, yet a good deal of work was done in the different departments, and the clinical teachers of the German Universities were well represented; especially was this the case with the gynæcologists, physicians, and neuropathologists. Pathology, diseases of children, and anatomy and physiology mustered equally strong, and if the same cannot be said of surgery and ophthalmology, the fact must be taken into account that both the surgeons and the opthalmologists have an annual congress of their own. Besides the sectional work, of which I shall speak further on, general addresses are given at these meetings, for which three days are set apart. The papers read at these meetings, it must be confessed, fell below the average. Professor Hermann gave a masterly sketch of the advances made in physiology during the last forty years, and Professor Kussmaul, in an equally able address, did full justice to the scientific work done by the late Dr. Stilling (the president of last year's annual meeting). The paper by Professor Golz on the Heart was hardly more than a popular lecture on that subject; while I do not know how to characterise the address given by Dr. Jäger, who identified the human soul with the odoriferous organ, and showed graphic representations, in the form of curves, of the effect produced by the most heterogeneous bodies on his own olfactory ganglion. The other papers read at the general meetings were not of medical interest.

Of the sectional work done I can give but an imperfect sketch, for many of the sectional meetings clashed as regards the time, and the buildings in which some were held lay too far apart to enable one to attend more than two or three sections.

In the Pathological department, Professor Recklinghausen spoke of "Hyalin," a body which is some form of fibrine, and which was described recently by Langhaus as "canalised fibrine." This substance, which is of hyaline structure, is found either in the lumen or in the wall of small arteries, and in areolar tissue in different pathological processes: thus it is found in the kidney in cases of senile gangrene; it is found in aneurismal sacs and in diphtheritic membranes; it is identical with Gull and Sutton's capillary fibrosis, and is evidently related to amyloid degeneration. Experiments on frogs have led Professor Recklinghausen to believe that hyaline is altered cell-protoplasm, which leaves the cell without the latter undergoing any material changes. Dr. Marchand described some cases of fatal poisoning by chlorate of potash; in all these cases large doses had been administered. The blood in all these cases showed a chocolate colour, due to the presence of methæmoglobin. The urine was albuminous, and contained altered blood, and the renal tubes were found filled with casts composed of altered blood-corpuscles. (Dr. Marchand's paper has just appeared in Virchow's *Archiv*). Professor Arnold's paper on the changes in the nuclei observed in tumour-cells, when examined quite in the fresh state, is of less general interest. The observations on this head, too, have appeared in Virchow's *Archiv*).

Amongst the subjects discussed in the Medical section I will briefly mention the following:—"Faradisation of the Stomach in cases of Dilatation and Catarrh of the Stomach." The method employed consists in introducing one insulated electrode, which is attached to the tube of the stomach-pump, into the stomach, and applying the other electrode to any part of the body. Though it is very doubtful whether, in this case, the walls of the stomach really contract, yet both Kussmaul and Ziemssen expressed themselves in high terms as to the benefit derived from the methodical application of electricity in such cases. Several papers

were read on the therapeutic value of digestive ferment. Trials with the different preparations found in trade showed that nearly all German preparations were inert, while the only English preparation which was tested gave satisfactory results. Professor Kussmaul, finding that pepsine was always present in the gastric juice, even in very inveterate cases of gastric catarrh, does not believe that the administration of pepsine can be of much use. None of the speakers and experimentators seem to have attacked the subject from the practical point of view, such as has recently been done by Dr. William Roberts, of Manchester, who succeeded in completely peptonising milk with properly prepared pancreas extract, and who has thus opened out quite a new line of treatment for gastric disturbances. Pancreatic digestion is evidently beginning to interest the therapeutists as well as the physiologists. I must, however, reluctantly pass over the other papers read in this section for fear of making this letter too long.

I beg to call the attention of some of your readers to a paper read by Dr. Wyss, of Zurich, on Fœtal Rickets, a subject but too little studied in this country.

On coming to the Gynæcological section, in the debates of which, besides the most noted German professors, Mr. Spencer Wells (whose presence was felt by all as a high honour done to the Association) took an active part, I find the material much too overwhelming to give anything like a *résumé* in a letter like this. Amongst the more important papers I will only mention the following:—On Castration, by Professor Hegar (42 cases, with a mortality of 16·69 per cent.; the cases operated on were chiefly tumours of the uterus oophoritis, parametritis, &c.) On Extirpation of Abdominal Tumours, by Schröder, and which subject gave rise to a very interesting discussion on Hydatid Tumours in the Female Pelvis, by Professor Kreund.

In one of the general meetings it was decided that in future ladies should be entitled to receive only ladies' tickets, with a view of preventing them from reading papers or taking part in the discussions. This step was taken owing to the fact that last year an English lady read a paper in the Anatomical section. It was further decided to hold the next meeting at Dantzig.

Baden Baden, September 28th.

THE MURCHISON MEMORIAL.

Fifth List of Subscriptions.

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W. T. Woods, Esq.	16	

Correspondence.

"Audi alteram partem."

STAPHYLORAPHY.

To the Editor of THE LANCET.

SIR,—In a communication by Dr. John Duncan in your last week's issue, styled "An Improvement in Staphyloraphy," the author deplores the "considerable proportion of failures in staphyloraphy," and ascribes this want of success largely to the fact that no attempt is made to detach the velum palati from its connexion, by muco-periosteum, with the flow of the posterior nares.

Dr. Duncan advises the complete separation of the soft palate from this connexion by means of a bistoury, and quotes a case where he put the plan into practice, concluding with the remark that his single case does no more than prove the operation to be practicable.

I can assure Dr. Duncan, from an experience of a hundred or more operations, that the proceeding he recommends is not only practicable, but, among other things, essential to the attainment of any high degree of success, and that if he will modify his practice in the direction he himself indicates he will be less disposed to take a gloomy view of the prognosis in staphyloraphy. Perhaps I may venture to refer him to the seventh volume of St. Bartholomew's Hospital Reports, published 1871, where, if he is interested in the matter, he will find an exact description of the modifications he proposes. In the paper to which I refer the necessity of the detachment of the velum from the posterior margin of the hard palate is insisted on, and curved scissors are recommended for the purpose, while the use of a supplementary suture in certain cases is recommended.

I am, Sir, &c.,

Stratford-place, W., Oct. 7th, 1879. THOMAS SMITH.

HONOURS TO MILITARY MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—I have just been reading a book, published by Rivington and Co. last year—"Constantinople: How we got there. By an Engineer." In this work a passage occurs which strikingly confirms all you have written in THE LANCET, particularly in a leader of the 27th ultimo, concerning the shameful paucity of honour and rewards meted out to the Medical Department of the Army for their service in war, to say nothing of the insult offered to the profession by the Indian Viceroy, in being coupled with the telegraph and postal departments in his thanks to those engaged in the late Afghan war. When the neglect to bestow honours on the Department is so patent as to attract the notice of a layman, it is high time the profession interested should take some active steps to remedy the grievance. The author describing his visit to the English cemetery at Scutari, where many of the Crimean men are buried, says:—"One thing that struck us particularly at the cemetery was the number of graves on which the tombstone told that a doctor lay beneath. Let those who think that the path of a medical man is as devoid of danger as of glory go to those Eastern tombs and read the oft-told tale, not once nor thrice, but by scores of times, 'Died in the execution of his duty,' and think of those awful periods when, though the war may be at its height, wounds form but the smallest portion of the danger; when cholera and fever stalk in their deadly strength through the crowded wards; when appliances and comforts to meet these ghastly foes are nearly wanting, and then, when wearied and overcome by the unequal conflict, the exhausted frame gives way, and 'died in the execution of his duty' is the epitaph. Say, is not the conduct of these devoted men as deserving of reward and glory as that of the fiercest leader who ever led a Balaklava charge?"

I am, Sir, yours faithfully,

WALTER PRATT.

Pulham Market, Harleston, Norfolk, October 7th, 1879.

THE HEART COMPLICATIONS OF RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Supplementing the note on the Treatment of Acute Rheumatism, which appeared in your issue of the 20th ult., and in reply to Dr. Maclagan's communication of the following week, permit me to say that the average age of all the cases in the various groups was as follows:—Salicylate group, 24·03 years; alkaline group, 23·3 years; alkaline and quinine group, 24·3 years.

The total number of cases under twenty years of age in each group was twenty-seven in the first, twenty-one in the second, and ten in the third.

I am, Sir, yours truly,

DAVID W. FINLAY.

Montague-street, Portman-square, W.,
October 6th, 1879.

LIVERPOOL.

(From our own Correspondent.)

THE Liverpool School of Medicine opened for the session on Saturday, October 4th, with more than usual *éclât*. The proceedings commenced with a demonstration in the School of Medicine by Professor Sayre, of New York, which was largely attended, not only by the students, but by the practitioners of the town and neighbourhood, who appeared to take a warm interest in the several events of the day. Dr. Sayre's address was characterised by that earnestness and force with which many of your readers are now so familiar, and at its conclusion he received the cordial thanks of his audience. This, after an interval, was followed by the introductory address of the session, by Dr. John Wallace, the recently appointed Lecturer on Midwifery,[1] which being of a highly practical character, was listened to with much attention. The lecturer's allusion to Professor Lister in connexion with the antiseptic system, and its application to the operative treatment of the diseases of women, was most graceful, and called forth from the large and appreciative audience which had assembled to witness the proceedings a most enthusiastic reception. After distributing the prizes to the students, Professor Lister addressed them. His remarks had reference rather to the spirit in which medical studies should be prosecuted than as to the precise modes by which the necessary information might be acquired. He particularly dwelt upon the humanising nature of these studies, and how, when pursued in the spirit to which he had alluded, their tendency was not, as it had been said, to harden the hearts of those engaged in medical and more particularly in surgical pursuits, but, on the contrary, to render them more sympathetic than others to the sufferings of their fellow-creatures. At the conclusion of his address, Professor Lister gave a demonstration of antiseptic surgery in the operating theatre of the Royal Infirmary, where he removed antiseptically a fatty tumour from the back.

In the evening the business of the day was brought to a conclusion by the anniversary dinner, which was held at the Adelphi Hotel, under the presidency of Mr. W. Mitchell Banks, one of the surgeons to the Royal Infirmary. Amongst the guests were included the Mayor of Liverpool, Professors Lister, Sayre, Turner of Edinburgh, Drs. Ferrier, F. T. Roberts, Matthews Duncan, Clifford Allbutt of Leeds, and Mr. Baker of Birmingham.

[1] An abstract of the Address will be found in another column.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this Society, held on Friday, the 3rd inst., the following office-bearers were chosen for the session 1879–80:—President: Dr. Andrew Fergus. Vice-Presidents: Drs. M'Call Anderson and D. Taylor (Paisley). Council: Drs. William Macgill, Hugh Miller, Alexander Robertson, A. L. Kelly, Bruce Goff (Bothwell), J. B. Russell, George Willis (Baillieston), and George Mather. Secretaries: Drs. Joseph Coats and W. L. Reid. Treasurer: Dr. Hugh Thomson.

Medical News.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 25th:—

Groom, Henry Thomas, Camden-road.

The following gentlemen passed on Oct. 2nd:—

Clarke, William Jenner, St. Augustine's-road, Camden-town.
Graham, Albert Wm., Cambridge-street, Warwick-square.
Jackson, Thomas, Shackthwaite, Penrith.
Pollard, George Edward, Brompton-square.
Steele, Warwick Charles, Wollaston House, Dorchester.

The following gentlemen on the same day passed the Primary Professional Examination:—

Thomas Renel Atkinson and Arthur George S. Mahomed, Guy's Hospital; Robert Bradley Roe, St. George's Hospital; Fredk. St. John Kemm and John Hutchinson Russell, London Hospital; Thomas Thomson, Edinburgh.

At the preliminary examination in Arts on Sept. 19th and 20th the following candidate passed in the Second Class:—

P. B. Bentlif.

IN London last week 1318 deaths were registered, and included 4 from small-pox, 21 from measles, 61 from scarlet fever, 8 from diphtheria, 34 from whooping-cough, 38 from different forms of fever, and 61 from diarrhœa. The fatality of diseases of the respiratory organs is, as is usual at this season of the year, increasing, 201 deaths being attributed to these maladies, against 189 in the week ending September 27th.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The first meeting of the session will be held at 1, Adam-street, Adelphi, on Friday, October 17th, at 8 P.M., when an inaugural address will be delivered by the President, Dr. J. S. Bristowe.

GRESHAM COLLEGE.—Dr. Symes Thompson will commence his course of lectures on Physic in the theatre of Gresham College, Basinghall-street, on Tuesday evening next, the 14th instant, and three following days. These lectures, which were founded by Sir Thomas Gresham, are read to the public gratuitously.

CAMBRIDGE MEDICAL SCHOOL.—The winter session has been opened in Cambridge, not in any formal manner, but by the commencement of some of the professors' lectures and practical courses, and others will follow next week. The chief new feature is the human anatomy dissecting room. The room before used had become quite inadequate in consequence of the increased number of students, and a good, sufficiently spacious room has been built over it and some adjacent rooms during the past summer. It is well lighted, ventilated, and warmed, and furnished with the necessary appliances. There are many advantages in the dissecting room being placed in an upper storey.

ROYAL COLLEGE OF SURGEONS.—The Calendar of this institution, which has just been published, contains much valuable and interesting information. During the past collegiate year 95 candidates were examined for the primary fellowship; 48 passed, and 47 were rejected. At the pass examination for this distinction 28 candidates were examined, and 18 passed. For the membership of the College there were 783 candidates examined for the *primary* or anatomical and physiological, of which number 530 passed, 222 were referred for three months, and, in pursuance of a recent regulation, when great ignorance was exhibited, 33 were sent back for an additional three months. At the Pass Examination in Surgical Anatomy and the Principles and Practice of Surgery and Medicine, there were 507 candidates, of which number 285 passed, 58 were approved in surgery, but required to qualify in medicine before admission as members; 76 who were approved in surgery, afterwards qualified in medicine, 361 received their diplomas, and 164 were rejected. For the Licence in Midwifery there has not been any examination for the last three years. During the year 33 candidates have been examined for the Dental Licence, 27 of whom passed to the satisfaction of the Board. The Council of the College have met eleven times. The Court of Examiners have had thirty-two meetings, for the examination of candidates for the fellowship and membership; and the Board of Examiners have held six meetings for the fellowship, and thirty-one for the membership of the College during the past collegiate year.

Medical Appointments.

ADAM, T. B., M.B., has been appointed a Resident Assistant to the Western Infirmary, Glasgow.

BECKINGSALE, D. L., M.D., has been appointed Medical and Surgical Registrar to the Victoria Hospital for Children, Chelsea, vice Brown, resigned.

BELL, P. G., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed a Medical Officer of Health for the Burton-on-Trent Rural Sanitary District, at £50 for one year.

BLYTH, C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the London Lead Company's Workmen's Medical Union, Nenthead, Cumberland, vice Don Bavand, resigned.

CALLAN, M., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer to the Workhouse, Ardee Union, co. Louth, at £35 per annum, and £15 per annum as Consulting Medical Officer of Health, vice P. Callan, L.K.Q.C.P.I., resigned.

FAIRCLOUGH, J. J. K., M.D., L.K.Q.C.P.I., M.R.C.S.E., has been appointed a Surgeon to the Chorlton-on-Medlock Dispensary, vice Mallett, whose term of office has expired.

FENWICK, S., M.D., F.R.C.P.L., Senior Physician to the Out-patients, has been appointed a Physician to the In-patients of the London Hospital, vice Ramskill, resigned, and appointed a Consulting Physician.

FIRTH, C., M.B., F.R.C.S.E., has been appointed a Medical Officer to the Norwich Dispensary, vice Richardson, resigned.

FITZPATRICK, T., M.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Clara Dispensary District of the Tullamore Union, King's County, at £100 per annum and fees, and £15 per annum as Medical Officer of Health, vice MacLoughlin, resigned.

FOWLER, J. K., M.B., L.R.C.P.I., M.R.C.S.E., has been appointed Pathologist and Curator of the Museum, Westminster Hospital.

GARRETT, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 6 District of the Brixworth Union, vice Perkins, whose appointment has expired.

GRIFFIN, F. C. G., M.B., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Weymouth, vice Lush, resigned.

HILL, A. B., M.D., has been appointed Public Analyst for the Borough of Leamington, at £20 per annum and 6s. 8d. per analysis.

HOGARTH, Mr. A. A., has been appointed a Resident Assistant to the Western Infirmary, Glasgow.

HOOPER, A., M.R.C.S.E., L.S.A.L., has been reappointed a Medical Officer of Health for the Burton-on-Trent Rural Sanitary District, at £50 for one year.

HOPGOOD, P. D., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Stow-on-the-Wold, vice Huxley, resigned.

JOHNSTON, A., M.D., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Ambleside, Westmorland.

KENDALL, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon for the District of Coniston.

KER, Mr. J. G. D., has been appointed a Resident Assistant to the Western Infirmary, Glasgow.

KING, W. L., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 4 District of the Downham Union, vice Johnson, deceased.

MCALISTER, W., M.B., has been appointed a Resident Assistant to the Western Infirmary, Glasgow.

MAVER, D., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Dalrymple, Ayrshire, vice MacLannahan, deceased.

MELLOR, T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Tottington No. 1 District of the Bury Union, Lancashire, vice Davison, resigned.

MONCKTON, D. H., M.D., has been reappointed Medical Officer of Health for the Lichfield Rural Sanitary District for three years.

MUIL, W., M.D., has been appointed Certifying Factory Surgeon for the District of Kirkby-Moorside.

NEWTH, A. H., M.D., M.R.C.S.E., has been appointed Medical Officer to the Mutual Provident Sick Club, Hayward's Heath, Sussex.

PARSONS, G., M.B., L.R.C.S.I., has been appointed Certifying Factory Surgeon for Hawkshead, Lancashire.

PEDEN, W. K., M.B., has been appointed a Resident Assistant to the Western Infirmary, Glasgow.

RIDGEWAY, R., M.D., F.R.C.S.I., has been appointed Certifying Factory Surgeon for the District of Oldcastle, co. Meath, vice Atkin, resigned.

SCATLIFF, J. M. E., M.D., has been appointed Honorary Physician to St. Mary's Hospital, Brighton, vice Nourse, resigned.

SIMON, R. M., M.B., B.A., M.R.C.P.L., has been elected Assistant-Physician to the General Hospital, Birmingham, vice Gibson, resigned.

SINCLAIR, Mr. E., has been appointed a Resident Assistant to the Western Infirmary, Glasgow.

SMITH, W. R., M.B., has been appointed an Honorary Medical Officer to the Branch Dispensary of the Cheltenham General Hospital and Dispensary, vice Bevan, resigned.

STAINTHORPE, W. W., M.D., C.M., has been appointed Medical Officer of Health for the Wareham and Purbeck Rural Sanitary District, Dorsetshire, at £100 per annum, vice the District Poor-law Medical Officers, whose appointments have expired.

STICKLAND, S., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Godshill District of the Isle of Wight Union, vice Williamson, resigned.

WILSON, T., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Yoxall District of the Lichfield Union, at £25 per annum and fees, vice Snoad, resigned.

WYLLIE, W., M.D., has been appointed Medical Officer of Health for the Kirkby-Lonsdale Urban Sanitary District, at £12 for one year, vice Page, whose appointment has expired.

Births, Marriages, and Deaths.

BIRTHS.

CLERKE.—On the 29th ult., at Chatham, the wife of Henry Clerke, L.K.Q.C.P.I., Surgeon H.M.S. *Malabar*, of a son.

CONOLLY.—On the 27th ult., at Waterloo-road, Dublin, the wife of John V. J. Conolly, M.B., Surgeon Army Medical Department, of a son.

HARDESTY.—On the 1st inst., at Bank-street, Galashiels, the wife of James Jeffrey Hardesty, L.R.C.P.Ed., of a son.

MAILE.—On the 1st inst., at The Crescent, Hipperholme, Yorkshire, the wife of C. E. Drayson Maile, M.R.C.S., of a daughter.

NIXON.—On the 4th inst., at Upper Merrion-street, Dublin, the wife of Christopher J. Nixon, M.B., of a daughter.

O'SULLIVAN.—On the 27th ult., at Camden-place, Cork, the wife of Stephen O'Sullivan, M.D., of a daughter.

ROOME.—On the 28th ult., at North Esk, co. Cork, the wife of Henry Roome, M.D., of a son.

MARRIAGES.

ATKINSON—BERRIDGE.—On the 25th ult., at the Parish Church, Sibberstoft, Joseph Atkinson, L.K.Q.C.P.I., to Elizabeth Georgiana, daughter of William Berridge, Esq.

SCOTT—BRITTEN.—On the 7th inst., at St. Mary's, Shenfield, by the Rev. F. W. Crick, William Edward Scott, L.R.C.P.Ed., &c., of Lancaster House, Lincoln, youngest son of the late John Scott, of Aynho Grounds, Northamptonshire, to Davian Frances, youngest daughter of David Britten, of Shenfield, Essex.

DEATHS.

CHEYNE.—On the 27th July, at Yea, Victoria, Alexander Mackenzie Cheyne, M.D.

EATON.—On the 14th July, at Koroit, Australia, Deodatus William Eaton, M.R.C.S.E., aged 59.

FLEMING.—On the 2nd inst., at Glasgow, John Gibson Fleming, M.D., aged 60.

GREEVES.—On the 29th ult., at Clevedon House, Hammersmith, John Greeves, L.S.A.L., aged 69.

MAUNSELL.—On the 27th ult., at Greystones, co. Wicklow, Henry Maunsell, M.D., aged 73.

MOON.—On the 2nd inst., at St. Leonard's-on-Sea, Henry Moon, M.D., aged 68.

REID.—On the 28th ult., at Troon, Ayrshire, John Litster Reid, L.R.C.P.Ed., aged 32.

THOMPSON.—On the 2nd inst., at Gomersal, Thomas Young Thompson, M.R.C.S.E., aged 57.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

THE CEYLON MEDICAL SCHOOL.

WE have been favoured with a report of the proceedings at the distribution of prizes at the Ceylon Medical School, and extracts from the report for the ninth session, 1878-79. The school is now ten years old, and seems to be progressing favourably. Some of the certificates are recognised by the Universities of Edinburgh, Aberdeen, and Madras. We find it difficult to estimate the value of the curriculum and of the examinations for want of details, and on account of the peculiar classification of students. There are "stipendiary students of the primary class," students who have passed as hospital assistants, others who have passed as "dispensers," in addition to licentiates. One good feature about the report is the mention of an increasingly strict preliminary examination; but here again there are subdivisions which puzzle us a little. There is a preliminary examination of candidates for the primary and secondary classes. Of 24 examined for the primary, 9 passed; and of 32 for the secondary, 20 passed. No good is to be done anywhere in medical education without severe preliminary examinations that will exclude persons incapable of appreciating good medical teaching.

H. S. N.—Apply to the Agents-General for the Colonies, Downing-street, S.W.

A. Z. should consult his medical adviser on the subject.

GALVANIC ACUPUNCTURE.

To the Editor of THE LANCET.

SIR,—It is now more than seven years ago when I began to use the continuous and faradaic currents directly to both muscles and nerves by insulated acupuncture needles, and I persisted in carrying out what I looked upon as an experiment, and made careful notes in relation thereto. Had I found that the procedure possessed any especial therapeutic value, I should have brought it before the notice of the profession; but I certainly did not, and I send you this as the experience of an old hand, which may be of some use to your readers.

I remain, Sir, yours &c.,

Old Burlington-street, W., Oct. 3rd, 1879. T. STRETCH DOWSE.

ASSISTANT-SURGEONS AT CONSULTATIONS.

IN reply to a correspondent, we have to state the general rule is that every member of the surgical staff is invited to attend the consultations, and to offer his opinion. Indeed it would be an invidious thing to draw the line at the junior officers. If a gentleman is competent to discharge the duties of assistant-surgeon, his opinion ought to be acceptable.

Dr. John Robertson.—We have not room to publish the correspondence sent to us. We can see nothing wrong in the conduct of the other party in the correspondence, and we venture to think that, on mature consideration of the facts, Dr. Robertson will agree with us.

A Subscriber.—A Bachelor of Medicine has not the right in question.

TREATMENT OF FRACTURES BY VULCANITE SUPPORTING FRAMES.

To the Editor of THE LANCET.

SIR,—Mr. Norman, in the report of his case of Fractured Jaws (*vide* page 504), states that not having seen any account of the previous use of supporting frames, instead of wire sutures, he deems the case of interest. A reference to the "Medical Digest," Section 1689, 6, will at once show that Mr. Salter in 1860 reported a case thus treated in THE LANCET for June, p. 594; and Mr. Hayward a similar case in July, p. 21.

Yours truly,
RICHARD NEALE, M.D. Lond.

Boundary-road, St. John's-wood, Oct. 8th, 1879.

To the Editor of THE LANCET.

SIR,—For the information of Mr. Walter Norman and Mr. Hayes, will you permit me to state that there is nothing new in the treatment of fractures of either the upper or lower jaw by the aid of "vulcanite supporting frames"? For many years past this plan has been successfully adopted.

Faithfully yours,
W. DONALD NAPIER.

George-street, Hanover-square, Oct. 8th, 1879.

W. H.—We do not know of any work or pamphlet relating to St. Thomas's Hospital of the kind referred to; but an application might be made to the secretary of the hospital for the information. Messrs. Churchill, of New Burlington-street, if we mistake not, published a few years ago a work, by Dr. Oppert, on Hospitals, which would probably help our correspondent with respect to other general hospitals.

Subscriber.—Rutherford's Outlines of Histology, supplemented by Green's Pathology.

Dr. James Mors, (Rothwell.)—Yes, in an early number.

THE CASE OF THOMAS MILLERCHIP.

To the Editor of THE LANCET.

SIR,—The following additional amounts have been forwarded to me, and the donors have requested an acknowledgment in the medical journals:—

T. White, Esq., Belgrave-road, W.	£1 1 0
Sundry sums collected by W. Hugman, Esq., Guildford-street	2 15 0
D. B. Balding, Esq., Royston	1 1 0
J. Bridges, Esq., Cottenham	1 1 0
Dr. Archer, Royston	0 10 6
Dr. Anningson, Cambs	0 10 6
Dr. P. Frank, by D. Balding, Esq.	1 0 0

The total sum received amounts to £71 6*s.* 6*d.*, £60 of which has been paid over.

I am, Sir, yours truly,
JOSEPH ROGERS.

33, Dean-street, Soho, Oct. 8th, 1879.

Mr. W., (Edinburgh.)—The subject for the Jacksonian Prize for the ensuing year, 1880, is "The History, Principles, Practice, and Results of Antiseptic Surgery." Mr. Savory, being a member of the Council of the College, could not, if so disposed, compete for the prize.

Lex non Scripta.—Our correspondent's reasoning is ingenious; but we are not aware of any law or custom in favour of his views.

PLASTER-OF-PARIS JACKETS.

To the Editor of THE LANCET.

SIR,—Having had many complaints of the annoyance caused by the crumbling away of the plaster-of-Paris jackets, I suggested to the mother of the girl to whom I lately applied one to paste it over with paper, and found that it answered the purpose perfectly. Can any of your readers oblige me with their experience of the poroplastic jacket?

Yours truly,
H. A. C.

October 4th, 1879.

Mr. Chas. Low.—A reader should not confine himself to one work; but where the one in question is short or imperfect, supplement it by others, such as that of Roberts or of Bristowe.

Dr. Fairweather.—The kind of inquest described is unsatisfactory; but we fear it is within the discretion of a coroner to expatiate on a death that would puzzle the College of Physicians.

Dr. D. J. Brakenridge.—We shall be glad to receive the manuscript and the woodcuts.

ERASMUS WILSON TRUST.

IT may be necessary to remind intending candidates that applications with a view to lecture under the above Trust should be made to the Secretary of the College of Surgeons during the present month, as no application will be entertained after the 31st instant.

M.R.C.S.—Unfortunately, although the name of the delinquent does not appear in the Medical Register or Directory, as stated by Mr. Brown, it will be found in the Calendar of the College of Surgeons, from which, however, the Council of the College will, we understand, order its removal on Thursday next.

An Organist will find the subject treated of in Lecture XVII. of Plumptre's Lectures on Elocution.

W. H. B.—Roscoe.

SAL VOLATILE.

To the Editor of THE LANCET.

SIR,—We have the pleasure to enclose formulæ for sal volatile of the British Pharmacopœia and of the United States Pharmacopœia.

B.P. Pharmacopœia.	*U.S. Pharmacopœia.*
℥ oz. ammon. carb.	1 Troy ounce am. carb.
4 fl. oz. liq. am. fort.	3 fl. oz. water of ammonia.
4 fl. dr. ol. myrist.	2½ drs. oil of lemon.
6 fl. drs. ,, limonis.	40 min. ,, nutmeg.
6 pints S.V.R.	15 ,, ,, lavender.
3 ,, aquæ.	1½ pints (of 16 oz.) alcohol.
Distil 7 pints.	q.s. water to make 2 pints of 16 oz.

Yours &c.,
WRIGHT, LAYMAN, AND UMNEY.

Southwark-street, S.E., Oct. 6th, 1879.

A Subscriber.—The works of Dr. Bristowe and of Dr. F. T. Roberts on the Theory and Practice of Medicine; Carter or Lawson on Ophthalmic Diseases; Dr. W. Howship Dickinson on Albuminuria; Dr. Wm. Roberts on Renal and Urinary Diseases. In Midwifery, the works of Leishman or Playfair, and Barnes on Obstetric Operations; and Erichsen's Science and Art of Surgery.

Mr. Chas. E. Girardot.—The case was one in which it was a duty to procure medical assistance without delay.

TREATMENT OF CHOLERA BY HYPODERMIC INJECTION OF MORPHIA.

To the Editor of THE LANCET.

SIR,—Having read both Mr. Hardman's and Mr. Sarjeant's letters on the Treatment of Cholera, in one case by hypodermic injection of morphia, and in the other by tincture of opium, all I can say is that I fear they would find these so-called remedies of no use whatever if they had to treat cholera cases in India. I have tried both in India and many other so-called remedies, including strychnine, ammonia into the veins, antimony, chloral, &c. I never saw any good derived from any drug either given by mouth or by hypodermic injection. Hypodermic injection of chloral I have used frequently, and I fancy most benefit has been derived from that; but it fails as often as it seems to do good.

Yours obediently,
SURGEON.

October, 1879.

A NEW DECORATION.

A CORRESPONDENT draws attention to the fact of two young ladies walking about Boulogne-sur-Mer with brassards on their left arms, having the letters "L. M." in red on a black ground. He wishes to know whether they are Licentiates in Midwifery of the R.C.S.

J. B. M.—The construction of the audiometer, and the method of working it, were described in THE LANCET of May 31st last. We are not aware that the instrument, though ingenious, is as yet employed to any great extent.

Mr. Haines will find the information he requires on reference to our advertising columns.

J. H. (Chelsea) should apply to the Registrar at the Apothecaries' Hall, Water-street, Blackfriars, E.C.

THE MEDICAL GUILD OF ST. LUKE.

To the Editor of THE LANCET.

SIR,—May I be allowed to direct the attention of your readers to an advertisement which appears in your issue of to-day (Oct. 11th) in regard to the anniversary festival service of this Guild, which is to be held in St. Paul's Cathedral on the 21st inst. Our Guild has now been in existence fifteen years, and I propose shortly to give some account of its work and objects.

Your obedient servant,
ALFRED MEADOWS.

George-street, Hanover-square, Oct. 1879.

Vindex.—The appointments of district medical officers are *ad vitam aut culpam*. There has been some doubt whether a district can be changed without the consent of the medical officer who shall have been appointed thereto; and if this were the law, the change could only be effected when his office should have determined. The Poor-law Board, however, provided for this contingency in their Order dated May 25th, 1857, in reference to all appointments made after that date.

Mr. T. W. Hughes.—No one can properly sign a vaccination certificate who is not a registered practitioner.